

Boerhaave's
APHORISMS:
Concerning
The KNOWLEDGE and CURE
OF
DISEASES.

Translated from the last Edition
Printed in *Latin* at LEYDEN, 1715.

With Useful Observations and Explanations,
By J. DELACOSTE, M. D.



L O N D O N,
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Church-Yard. MDCCXV.

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T O

HANS SLOANE,

Physician in Ordinary to Her late MAJESTY Queen *ANN*, and also to His Present Most Sacred Majesty ;

A N D T O

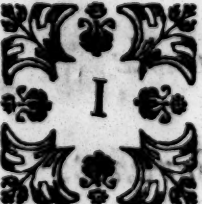
John George Steygertbale,

Professor of Physick in the University of *Helmstad*, formerly Physician to *George William* Duke of *Brunswick* and *Lunenburg*, and now Physician in Ordinary to the King's Most Excellent MAJESTY ;

B O T H

Members of the ROYAL-SOCIETY and Fellows of the College of Physicians in LONDON.

Gentlemen,

 T is not meerly through Matter of Form, that I address you ; but 'tis chiefly a regard to your conspicuous Parts and the real Respect I bear your Persons, that put me in Mind of acknowledging it in this manner to the World.

The Epistle Dedicatory.

And as your Merit is so clearly illustrated by the *Royal Favour and Trust*, that now again distinguishes you, so is your great *Candour* and *Generosity* no less manifested to all, as have the Honour and Advantage to know you.

Upon these Assurances, I have presum'd to ask your *Patronage* for the following Treatise; And hope, that altho' they bear the *Stile* and *Stamp* of a *Foreigner*, yet they may obtain some *favour*, and doubt not, but, if supported by your *Approbations*, they'll more effectually promote that *Publick Good*, I chiefly did propose to my Self by it.

'Twou'd be very improper here to mention the *Worth of my Author*, or the Reputation he hath gain'd in the *Learn'd World*, wherein your selves make so great a Figure; all I shall add is, That as your *Sagacity* will easily discover, so I am confident, your *Goodness* can as easily Pardon the Defects of,

Honoured Sirs,

Your most Obliged and

most devoted humble

Servant,

Frith-street, Soho,
May 1st, 1715.

J. Delacoste,

The AUTHOR's PREFACE.

YOU have here a little Book, tho' small in Bulk, yet weighty as to its Contents, and whose Birth is due to no small Labour. This is an ampler Edition, and in some Places more clearly expressing my Meaning than the former. It promiseth Rules, by which you may unfold the Causes of Diseases, and assist Nature in carrying them to their Issue. The Industry of the Ancient Greeks, the Diligence of the succeeding Arabians, and the Exactness of a few among the late Moderns, have supplied us with Experiments altogether necessary to the finishing of this Work. But Anatomy and Mechanics, both better and more universally understood in our Days have laid the Foundations and spun the Thread of our Reasonings; Both of 'em sure! Whatever

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Some

The AUTHOR'S Preface.

some Ignorant or Invidious Men may clamour.

† They hate and revile Things only for being above their reach; and therefore hurt nobody but themselves by their noisie Ignorance: But when they Indulge themselves in their Humours of Calling this Method Paradoxical, and alledge its Novelty for a Crime and Dangerous to be embraced, They only move Laughter and Mirth in such as know better. Whoever is acquainted with the Ancients, and compares their Anatomy and Theory of Physick with that of the Late Moderns, will see what Improvements have been made; And it is only those, that I allow to be able Judges of this Controversy. And I desire them, for whom I have a particular Value, to consider, that these Aphorisms were only design'd for my private Lectures, and thence they'll know the Reasons both of their Brevity and Order. I rather chose to quote no Authors at all, than to crowd this short Treatise with many, which I cou'd not have avoided, to do every Body justice. Nor have I been guilty of

† Dr. Boerhaave points here at Dr. Le Mort, Professor of Chymie at Leyden, who wrote a very foolish Libel in a very scurrilous Stile, against the Mechanical Method, &c.

giving

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giving Magnificent Titles to any Simple or Compound Medicine. For I do not know any one Thing, which is either more Prejudicial to the Noble and Generous Art of Physick, or more Able to expose it to Reproach or Contempt of such credulous People, as are always ready to try every Thing, that is cried up, and then find by their own Experience that they were deceiv'd. And I cannot admit that any other Qualification doth recommend and raise the Price of one Medicine above another, but the Proportion, wherein each is more properly, seasonably, and prudently applied according to all the peculiar Circumstances both of the Patient and the Disease; And in this, I conceive, and speak it without blushing, I have been extremely clear and positive, at least, I have taken much Pains to be so, Thinking it the very Characteristic of a good Physician to make a true Indication.

To be short I Conclude, begging the Reader to Consider, that this Treatise is wrote in a Stile adapted entirely to the Subject; not with the Elegance of the Augustean Age,

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which

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which might have pleased some People better, but must have puzzled a greater Number to find out my true Meaning, and wou'd have required more time, than what I can spare from more Important Business. Reader Farewell.

THE

THE
PREFACE
OF THE
TRANSLATOR.

I Hope all *Englishmen* in general will be pleas'd to see in their own Language the Treatise of an Author, whose Reputation is at the greatest Height not only abroad but even here, where a great Number of Physicians think (and with reason) to recommend themselves highly by letting the World know, that they were Dr. *Boerhave's* Disciples: And as Self-Love is an irresistible Argument in most People, they'll still be better pleas'd, when they shall know, that he is a great Admirer of all the famous *English* Worthies of the last and present Age. Whoever looks into his very late Dissertation, *De Certo comparando in Physicis*, he'll find him there extolling the never to be forgot *Verulamius Baco*, proclaiming him, *Virum*
ad

The Preface of the Translator.

ad omnia, quæ Scientia humana comprehendendi possunt, indaganda facile principem, Et de quo dubites, Utrum Consilio, an Exemplo, Labore vel Liberalitate major fuerit in instauranda de formata Physica. And he adds, that whatever Improvements have been made in Natural History from the Beginning of the Last Century to this present Day, is altogether owing to the Admonitions, Precepts, and Experiments of that great Man; Who thought it no small reproach to his Age, that all Mechanic Arts were every Day advancing, and the Sciences at a Stand, and this from an Over-regard and reverence for Antiquity, and for a few great Men amongst them. Next to the Lord Bacon, he also expresses his Value in the most significant terms for some but lately deceased, and several yet Living great Mechanics in England, placing Sir Is. Newton at the Head of these, and the great Boyle in the Front of the others.

And as there is no Country like England in Europe, where (notwithstanding the Number of good Physicians, who have spared no Pains both Abroad and at Home to acquire all the Necessary parts of Knowledge, and for that reason are more respected and generally better rewarded, than in any other Parts) so many Surgeons and Apothecaries do practise Physick, and administer Remedies without the Advice of a Physician, chiefly in the Country

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Country Towns, and at Places distant from such as Physicians have thought it worth their while to settle in; I hope those Gentlemen will not take it amiss if I declare, that it is chiefly for their Sakes, that I have taken the Pains to render this excellent Treatise into the *English* Tongue, the like whereof was never yet publish'd. For though several, perhaps many, might be capable enough of reading it in the Original *Latin*; yet I believe the Majority will be glad, I saved them the Pains of studying Words, when they'll be sure to meet with Matter enough to employ all the Attention they are Masters of: And besides, The *Latin* and Stile of our Author is so Concise, that a Reader ought to be somewhat used to it; Which is my Case, having had the happiness to have been Dr. *Boerhave's* Disciple for two Years together; I was the more ready to undertake it, lest some other might mangle, disguise it, and even have the Front to Publish it in his own Name, as some body did not long ago his Institutions. When I said, that no Treatise, like to this, had ever yet been Publish'd, I chiefly intended to shew, that none of the most celebrated Authors had yet began their Systems in this natural and easie Way; From the Simplest Body, easiest understood, and visible first to the Microscope, and then to the Eye, rising gradually in the same Order to the least, more and most compound, always in a continued Chain,

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Chain, acquainting his Reader first with those things, which wou'd stop him by the Way, if the contrary Method had been taken ; Whereas you'll see the Generality of other Systems to observe indifferently any and even the Contrary order, just as it first comes into their Heads, and only fit for a Reader consummate already in the Art, and consequently of little or no use : Some begin with the most difficult Diseases of the Head and all its Parts, go on with such as are common to the Thorax and its Contents, than to those of the Abdomen, the Limbs, the Skin, &c. treating of Fevers under a particular Head, as if they were Diseases not to be ranked under any of those Classes. Others begin with the Diseases of Mastication, Deglutition, Concoction, Chylification, Sanguification, Secretions and Excretions, &c. *Quot Capita tot Sensus !* And as to the Method of writing Aphoristically, *Baglivi* complain'd a few Years ago of its having been neglected since the Ancients, and Enumerates the Reasons why it is preferable to all others, shews the Way to it in some Examples, wishing it may be follow'd for the Improvement of the Art ; But even he is far short of our Author ; For though he saw the Truth, we may say, he saw it as through Clouds, which *Dr. Boerhave* has happily dispers'd for the good of Mankind, So that henceforth the Reproach of *Ars Longa* will be changed into the Encomium of *Scientia Certa & brevis paranda.*

I have

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I have publish'd it with the Numbers and the repeated Quotations of the Numbers of Aphorisms, thereby to make it Necessary to the Reader, (according to the Author's intention) to read every thing over and over again, and not to run it off like a News-Paper, which wou'd or might have happen'd, if I had filled up every thing with the References of the Author; besides that it wou'd have swell'd the Book to more than twice the bulk, and enhanced the Price above what abundance do care to bestow on Books at once.

If the Language is not the purest, I hope that may be forgiven to a Stranger, who but eleven Years ago did not understand one word of *English*; and lest it should be too faulty, I desired and obtain'd of a judicious Friend of the Profession to overlook my Translation, and to alter what he thought necessary. I have follow'd his Directions thankfully, but where I thought him not well grounded, which happen'd chiefly from his not being so well acquainted with the way of thinking and expressing of Dr. *Boerhave's* as my self.

I have done the Author that justice, not to confound my own Thoughts or Observations with his Text; I have taken care to distinguish the one from t'other by Comma's in the Margin, except only where I give but a short
Para-

The Preface of the Translator.

Paraphrase of the Author's Words, and that mostly such a one, as I can produce in a Manuscript taken from his own Mouth at his Lectures in *Leyden*.

I have transposed the Chapter of *Rhumatism* from the End of the Work immediately after that of the *Gout*; which I am sure the Author would have done himself, if he had thought to treat of it separately before it was near finish'd, or had not been unwilling to take the Pains to alter all his Numbers and References in the following Chapters, which Trouble I have willingly taken for Orders sake. There is but seldom occasion to be of a contrary Opinion to the Author's; If any, it is mostly upon account of the different Climate, or Way of Living and Dieting, which has made it Necessary to apply different Means, or the same Means in another Method, than what he sometimes adviseth; But I dare speak it, *He is never out in his Indications*; As they are built upon the clearest understanding of the Animal OEconomy, The texture of the Parts, Motions of the Fluids, and the Power, which other Bodies have to cause Alterations in any of these; Besides as great an assistance of Observations and the History of Diseases, as any Physical Authors whatever, tho' of ten times the bulk; It is no wonder, if we think him acquainted with the Origin of Diseases, and affirm, that he has made the surest Steps towards their Removal:

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moval: Which is all that Dr. *Mead* requires of the best Physician, and which every impartial Judge, though unacquainted with Mechanics, and consequently therefore no great Lover of 'em, will readily give his Consent to.

Those Gentlemen, for whom I chiefly design'd this Translation, will here in a small Space of Time and with some application learn to avoid Confusion, and to build upon sure Principles, to speak a plainer Language than they have hitherto used, and (which is no small Advantage) they'll be enabled to judge of the true Merit of Physicians, and to distinguish between those, who are forced to hide their Ignorance and confused unsettled Thoughts under the Cloak of a Jargon, which they themselves do not understand, or who have no other Merit than the noisy Clamour of *Oxford, Oxford!* their Equipages, or the Cunning sly way of engaging Nurses and some ignorant Women in their interest; Not to mention their affected Cant, of naming Providence and God's Blessing upon all Occasions; as if the Almighty cou'd be supposed to alter the Mechanical operation of ill-applied Medicines to shelter them from blame.

Surgeons will not be displeas'd to see a great Physician own, that Internal Diseases depend on the right understanding of External ones of their Province, and that no Physician can be a compleat one, unless he has built upon the Foundation of Surgery.

Apo-

The Preface of the Translator.

Apothecaries cannot be sorry to meet with plain Rules to direct 'em in their Intentions (generally their weak Side,) when they shall be concern'd alone either with internal Distempers, or upon some emergent Occasion are obliged to act the Part of Surgeons.

And I hope both they and the generality of Physicians will be convinced of my good Intentions, when they shall consider, that I have not increased the Number of Pretenders and Quacks by a Multitude of Receipts.

If these my Endeavours for the Publick good meet with tolerable Success, it may encourage me to embrace more Opportunities to further the same.

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Dr. BOERHAVE'S
Practical Aphorisms.

The INTRODUCTION.

1.    Whatever State of the Human Body doth disorder the Vital, the Natural, or even the Animal Functions of the same is call'd a *Disease*.

2. And that part of the Science or Art of Physick, which teacheth how to find out the Disease actually afflicting the Patient, and how to cure the same, is called *The Practice of Physick*.

3. Whosoever therefore is unacquainted with what is requisite to perform well all vital, natural and animal Functions ; and consequently is ignorant of the Causes of Life and Health ; can never discern and know rightly the Defects, that is, the Diseases of them.

4. *A Cure* therefore is the *Changing* of a Disease into Health : and consequently supposeth a Knowledge of what is just now mentioned (3.) and consequently

frequently the Knowledge and the Cure of Diseases require the Knowledge of those Doctrines which expound what it is, which is strictly termed *Life* and *Health* in Man, viz. the Institution of Physick, or the Animal OEconomy, or the Theory of Physick.

5. This *Change* (4.) occasions, or directs a certain Motion by the *Application* of such Instruments as the Physician ought to know and direct: And so we suppose the knowledge of all what belongs to Dieting, to Medicines and Surgery, and also the different ways of preparing and applying all those means.

6. The *Application* of these means (5.) is governed and directed by a fore-knowledge of their Effects: which requireth a general knowledge of the Laws according to which those actions are perform'd: which sheweth the Doctrine of the Signs and the Method of Physick to be necessary Sciences. So that whoever designs to lay down Rules for the Practice of Physick, ought first to be well acquainted with all the parts of the Theory and Institutions of Physick. These therefore we shall now suppose not only known, but also demonstrated in another place.

7. A Disease (1.) when present in a Body must needs be the bodily effect of a particular Cause directed to that Body.

8. Which Effect being entirely removed, Health is recovered.

9. It may be removed by correcting the Illness it self in particular, viz. by the application of Medicines to the particular diseased Part, or by
some

some Remedies which operate equally upon the whole ; The first we'll call *a Particular*, the latter *a General Cure*.

10. The way to both is discovered either by *observation* or by *comparing* one case with another ; or by a true *reasoning* from 'em both.

11. Observations are taken : 1. From an exact History of Diseases, giving an Account of the Causes, the Nature, and Effects of the first Ill. 2. From a most nice Account of all such Things, which have proved beneficial or hurtful, whether they were given the Patient designedly or by chance. 3. From the Inspection of open'd Bodies the Diseases whereof were very well taken notice of before Death.

12. He concludes from Similitude, who reasons on the Nature and Cure of an unknown Disease from the Comparison of the present obscure case before him with the foregoing Observations.

13. Thirdly, *He* who doth with the greatest exactness imaginable, weigh every individual thing that shall or hath hapned to his Patient, and may be known from the Observations of his own, or of others, (11.) and who afterwards compareth all these with one another, and puts them in an opposite view to such Things as happen in a healthy State ; and lastly, from all this with the nicest and severest bridle upon his reasoning faculty riseth to the knowledge of the very first Cause of the Disease, and of the Remedies fit to remove them ; *He*, and only *He* deserveth the Name of *a true Physician*.

14. Now the best Method for to give a good and useful History of Diseases, and to teach which way to cure them, must needs be that, *which*,

1. Sets down every particular Disease's each individual Signs and Attributes, such as are peculiarly belonging to the same, or common also to other Distempers, and which performs this from a Self-knowledge, with deliberation, in its proper place, and above all with the exactest truth.

2. Which ennarrates all things, that have befall'n the Patient during that particular Disease from such things, as either he did, took, kept, voided or had applied to him.

3. Which expounds and sets forth the several Helps which a proper Diet or Surgery, or Medicines do afford, together with the true Method of applying them, whether known by Chance, or from the true and well reasoned rules of the Art of Physick.

4. Which forms it self those Rules as certain to be followed in the whole Practice from the Three just mentioned and laid down as granted, with all the Conditions mentioned and required in a true Physician in the 13th Aphorism.

15. Diseases are so many, that it makes the ranging of them into a particular order more difficult.

16. But it is the most natural to treat of them first. 1. Which are most thoroughly known.

2. Which in their Nature are the least Compound.

3. Which are easiest cured. 4. The knowledge of which is necessary to understand another.

17. According to which Rules we shall proceed in the following order.

18. We

18. We shall therefore treat first of *the several kinds of the least Compound Diseases*, and their Cure.

19. *The Diseases of the Solids consequently*, and their Cure claim the first place.

20. And among these, *the Diseases of the most simple and solid Fibre and their Cure* ought to be the first.

Distempers of the solid simple Fibre.

21. Those Parts (which being separated from the fluid contained in the Vessels, are applied and sticking to each other by the strength of the living Body, and make the least Fibre) are the least, the simplest, earthy and hardly changeable from or by vertue of any Cause, which are found in our living Bodies.

22. Hence the reason, why in them, separately considered, no one Distemper was ever observed by Physicians, or mentioned as having been cured.

23. But in the least Fibre, grown from the Conjunction of those Parts (21.) the following most simple Diseases from 24. to 38. deserve to be taken notice of: for they are frequent, and lay the foundation for understanding of others; notwithstanding they have hitherto been overlook'd, or not well enough understood. * Baglivi has publish'd a *Treatise with the Title, De fibra motrice & morbosa.*

Distempers of a Laxe and Weak Fibre.

24. *The weakness of the Fibre* is that cohesion of the minutest Parts described (21.) which is so

loosely linked, that it may be pulled asunder even by that degree of Motion which is requisite in healthy Bodies, or not much exceeding it.

25. The same is *preceeded*, 1. By the conversion of the Aliments into the Nature of healthy vital Juices obstructed; which is owing to the too great consumption of good Fluids, and to the Sluggishness of the powerful strength of the Solids over the Fluids; Or to the too great toughness of the Aliments overcoming the Powers that should alter them in the Body. 2. By the too weak application of one Part (21.) to the other, which proceeds from the too weak motion of the Fluids, and this again mostly from a Want or a Defect of the Muscular motion. 3. By a too great pulling of the Fibre, being near to a Breaking.

26. The Weakness *produceth* easily a Stretching and a Breaking of the small Vessels made up of those weak Fibres (24.) and consequently abates of their power over the Fluids therein contained; from which distensions arise Tumors; from the stopping or extravasated Fluids Putrefactions; and farther all such innumerable Ills, as are the Consequences of them both.

27. From what has been said in (24, 25, 26.) one may surely know when any Distemper from weak Fibres is present, past, or coming on; the Effects thereof may be foreseen, and what is necessary towards the Cure is surely known.

28. The Cure must be obtained; 1. By such Aliments as abound in such matter as is described (21.) and which be almost so prepared beforehand as it is in a strong and healthy Body;

dy; Such are Milk, Eggs, Flesh-broaths, Panadoes rightly prepared of Bread that was well fermented; and rough Wines. All which must be given in small quantities, but often. 2. By encreasing and invigorating the motion of the Solids and Fluids by means of frictions with a Flesh-brush or with Flannel; of riding on Horseback, and in a Coach, or being carried in a Boat; and lastly, of walking, running, and other bodily Exercises. 3. By a gentle pressure or bandage upon the Vessels, and a moderate repelling of the Liquids therein contained: 4. By Medicines both acid and austere, but applied with great caution and gentleness. 5. By any means as will remove and remedy the too great pulling of them.

29. *That Fibre is said to be Laxe and Loose* whereof the Parts are in that degree of Cohesion, that the same Fibre may with very little pains and pulling, be made longer than it was before; from whence it appears, that this is that Sort of weakness as in (24.) and that the aptness to bend doth depend from hence; and consequently, that all these Effects, as well as *the lessen'd Elasticity of the Fibre* are clearly understood from what has been said from (21 to 28.)

30. And even from thence Answers are ready to all the following Difficulties objected, *viz.* Why watry and fat Aliments occasion a weakness in the Fibres? Why the same Fibres are weak in People of a cold Constitution, in young People, such as move little, and such as are still growing? Why earthy Aliments, and such as have a moderate roughness strengthen the Fibres? Why People of

a hot Constitution, and such as exercise much, have strong Fibres? Why the Fibres have an Elasticity proportioned to their Strength?

Distempers of the Stiff and Elastick Fibre.

31. *The too great stiffness of the Fibre* is that sticking together of the minutest Parts (21.) which causes them to be link'd so closely together, that they will not, or cannot give way to that power of the Fluids, which in a state of perfect health ought to overcome their resistance.

32. *The same is occasioned* by all those Causes, which have been mentioned (28.) as necessary to cure the weakness of the Fibres, if those means are applied or continued too long.

33. The effects of that stiffness (31.) of the Fibres are to cause the Vessels made up of them to be less flexible, narrower, shorter, too much resisting and hindring the free motion of the Liquids, and occasion all the Disorders mentioned in (50, 51, 52, 53.) by a necessary Consequence.

34. From which one may know this Distemper (31.) when present, and also foretell the Consequences; nor is the Method of Curing the same less apparent.

35. The Cure is effected 1. by such Meat and Drink as is thin and watry without any roughness, chiefly the continued use of Milk-whey, of the softest Herbs and Sallads, and unfermented Liquors. 2. By avoiding of Exercise, and dwelling in a moist coolish Air, and taking long Sleeps. 3. by the taking or outwardly applying watry, lukewarm, tasteless Medicines, and such as contain the lightest and softest Oyls.

36. From hence is understood *the too great Elasticity* of the Fibre, and likewise how to cure the same, as being generally the Companion or the Effect of the too great stiffness.

37. And also, why Childrens, Womens, and idle Peoples Fibres are generally lax and loose; and on the contrary, why the Fibres and generally all the solid parts of full-grown People, of the Male-sex, of laborious People and such as exercise much, are mostly stiff and rigid: And why in those, when afflicted with a Palsie, there is a strong contraction of the affected Parts.

Distempers of the less and larger Vessels.

38. The Diseases of the least Vessels made up of the simplest Fibres (21. 22.) (either by an Application or a twisting of several together) proceed from the same Causes, have the same Nature and Consequences, and require the same Cure; and consequently may be learn'd from (21. to 30.)

39. The larger Vessels made up of the small ones by the application or twisting of several together, are subject to two several kinds of Diseases. The first of these depends on the Diseases of the smallest Vessels, which make up this large one; so that the Rise, Nature, Effects, and the Cure thereof must be taken from thence. (38.) But the latter Sort depends, 1. From the strength with which the Fluid running through this large Vessel doth press upon the sides of that Vessel in extending the same: Which Sides, being made up of the smaller Vessels, are by this pressure deprived

prived of their Fluid; and if continued they grow together, and into a solid Fibre, but in a larger Sort than that described (21. 23.) Which Effect may also be propagated to the next adjoining small Vessels. 2. From the nature of the Fluid which thickens and sticks to the sides of its proper Vessel.

40. From hence may clearly be understood, how Vessels are said to be weak, laxe, strong, stiff and elastic; whereof the Ignorant talk much without any true Meaning. And the Subject is so noble, that it deserves being treated of more at large.

Distempers of weak and laxe Entrails.

41. The weakness of the Vessels and Entrails we call that cohesion of the Parts, constituting the same, which may be broke with so small a Motion as to make them incapable of performing, what not only a living but a healthy state of Body doth require of them.

42. Which are different according to the different Age or Sex.

43. This Weakness proceeds, 1. From the weakness of the Fibre and the Causes thereof. 2. From the weakness of the smallest Vessels, and its Causes. 3. From the sluggishness of the Liquid flowing through the larger Vessels, which may proceed from its Quantity being lessened, or the increasing of its watry unspirited Nature; or lastly from the muscular Motion being grown slower and duller.

44. From

44. From the said (41.) Weakness occasioned by the Causes just mentioned arise many Diseases; which are falsely attributed to a bad Constitution, or supposed to be born with the Patient. The chief are, 1. An easie Dilatation of the Vessels and Tumors : An easie Compression of the same and emptiness : A stagnation of the Liquids : A more difficult and even resisting Motion of the Heart : A crudity of the Liquids, which were to acquire a farther degree of Coction there : A Putrefaction of the same succeeding thereon : An incapacity thereupon of performing the vital, animal or natural Functions : And consequently, all the Mischiefs that must follow from these; which as they are infinite in Number, so be they most difficult to cure, and very fruitful in producing new and unheard of Distempers; and chiefly these two general ones, which are noted by the Names of *Κανεξία* and *Κατοχυσία*. An easie dissolution or breaking of the Vessels, either from inward or outward Causes, being either sharp or acted violently; from thence an effusion, a stagnation, a corruption and emptying of the Liquid, which is necessary to life and health: An interception of the Motion of the Fluid, through the broken Vessels, and their Putrefaction; which were preserved entire by means of those Fluids moving through them : These again are many; and chiefly *Φθίσις*, *Εμπύημα*, *ὕδρωψ*, and *ατροφία*. x
Consumptions, Imposthumes in the Cheest, Dropsies, falling away and loss of Flesh.

45. Which if any one accurately considers, he shall not only know the Origin, the presence and
the

the event of this (41.) but also of an infinite number of other and very difficult Diseases, and he alone can have success in the finding out and applying of sufficient and safe Remedies.

46. And as for the application of those, the very weakness of the Part commands to take Time for the Cure; for in no other Case is a sudden Change more pernicious.

47. Therefore Remedies ought to be administered slowly, cautiously, and rise by degrees in the very efficacy of 'em: And after the Vessels shall be strengthen'd by their use, then and no sooner let the Muscles be put into a vigorous and strong Motion, till it appears from every Particular, that now the Vessels and Entrails are become sufficiently compact, solid and healed without a fear of breaking there anew.

48. From hence it appears, that what is reported of the Power of Aliments is false in one Sense and true in another. That the exercise of the Muscles doth strengthen the Fibres; That the exercise of Riding doth dissolve the thickned Humors, strengthen the laxe Parts without dissipating bodily Strength or the Spirits: That the very Blood of the strongest People is very thick, soft and kind; that of the weakest and tenderest on the contrary, broken, light, and sharp: That a number of Diseases, in appearance very different, may yet be Branches of the same Tree, the Root of which being cut they are all cured of course.

49. From the same Principles may be known and cured the laxness of the Vessels and Entrails.

Distempers

Distempers of the too strong and stiff Entrails.

50. The too great stiffness of the Vessels and Entrails is that coherance of the Parts of which they are made up, as will not give way to that degree of Motion, which was to change and move them, that all such Things might be performed, as in a living and healthy State did depend upon, and were occasioned by that Change.

51. It proceeds, 1. From all the Causes that occasioned too great a stiffness in the Fibres (32.) 2. but chiefly from the Fibres being strongly pressed upon each other by the overpowering strength of the strongly moving Fluids. 3. From the growing together of the sides of the small Vessels deprived of their Liquid by that strong pressure, by which the vital Liquid of the Arteries presseth the sides of the larger Canals; which Effect is most commonly produced and carried to a height by any violent exercise of the Muscles. 4. From a Vessel which with its proper, thickned, dried up and coagulated Juice is shut up and grown into a Solid.

52. Where this takes place in Vessels, the Effects are, 1. Resembling or the same with those that proceeded from too stiff a Fibre. 2. It occasions a strong Labour; So that the Fibres endeavour to bring themselves from the circumference of the Vessel to its center; to make its hollow narrower; to press, to squeeze, to repell and even to expell its Fluids; and consequently to hinder their protusion from the Heart, and also the action of the Heart it self; So that they hardly re-
move

move again to their proper extent ; from hence interrupt the even Motion and Circulation of the Blood, and consequently the several Secretions ; they lessen the quantity of Blood which the Heart ought to send forth at each beating ; they hinder the Heart from emptying itself entirely ; they produce Polypusses from that very remaining Blood, which being squeezed and robbed of its Fluid Parts, the Polypus grows harder and bigger, which at last produceth Choakings and sudden Death. 3. In Vessels wounded it occasions great Gaps, because of the great strength wherewith the several Parts of the Vessels do pull towards their fastnings : And when they are cut asunder entirely, the Cavity is much lessened at both ends, or sometimes entirely shut up.

53. From these set down in 31. to 37. and 50 to 52. and clearly apprehended, any intelligent Body may frame to himself Rules, by which he must understand the past, present and future stiffness, elasticity, and power of the Vessels, their present or approaching action, and the proper Cure for all.

54. For this is effected, 1. By all the Remedies which were set down as proper to cure the stiffness of the Fibres (35.) 2. And chiefly by all such as lessen the quantity, the thickness and the pressure of the Blood. 3. By such as suspend the Motion of the Muscles. 4. By all such, as moisten, soften, open, dilute, resolve and cleanse.

55. From all these, viz. 21. to 55. are sufficiently understood and a Method shewn for curing all the Diseases which are peculiarly belonging to the

the solid Parts of the Body : And from thence also appears what must be answered to the following Queries. Which be the difference of the Structure of the Solid Parts in the different Ages of Life ? Why Man grows, continues for some Years of the same height ; and afterwards in old Age grows shorter again, and less ? Why he is sometimes of a loose texture, sometimes of a strong and stiff one ? Why he is sometimes Moist and full, at other times Dry ? Why he dies a natural Death, and must needs die when he is come to a pitch of old Age ? And then of what illness he most commonly dieth ? What Distempers are most common to each particular Age ? What Diet, what sort of Life, what Medicines are the most adapted to the several Seasons of Life ? How far one ought to believe, and of what use it is, what has been said about the stiffness or laxeness of the Solids, &c.

56. We ought now after the most simple Diseases of the Solids to treat of the Wounds (16.) But as they always bring along with them Diseases of the Liquids as from their own Nature, we chuse to treat of those things first, which ought to be known before a compleat History of the Wounds be given.

57. So that we shall treat first of those Distempers of the Fluids, which naturally befall them, either when they are left to themselves, without being any ways affected from their Vessels, or when they are put into too violent, or too sluggish a Motion.

Of the most simple Defects of the Fluids and such as come of their own accord.

58. The several Humors which are to be found in a living Man, are either yet crude, retaining the Nature of such Aliments as were lately taken, or have through the Power of the Natural Functions, and the mixture with the other pre-existent humours in Man, acquired a Nature very like unto them.

59. The first mentioned are generally taken from Plants, or from the Flesh of other Animals.

Spontaneous Diseases from an acid Humor.

60. Our Liquids made up from mealy Plants, or Garden Fruits, either raw or fermented, if they overcome the Power of our innate Juices and of Life, acquire in us that nature and disposition, as they owe to the Nature of their Producers when fomented in a moist and moderate heat. From hence chiefly we must derive the *acid Acrimony*, and the more hurtful *glutinous Fat*. The first proceeds chiefly from fermented and not fermented Juices; The latter from *mealy* (*unfermented or boyled*) Aliments.

61. This acid Acrimony is generally the Product 1. Of mealy Aliments, juicy Acids, as are new, crude, actually working, or of such Vegetables as have fermented already. 2. Of a want of good Blood in that Body which takes the forementioned Food. 3. Of a Weak texture of the Fibres in the Vessels and Entrails (24. 29. 41.) 4. Of a Defect of the Animal Motion.

62. It

62. It first takes its Seat in the first Digesters, such as the Stomach and the Duodenum, from thence it advances with a slower pace into the Blood, and at last taints all the Humors of the Body.

63. It occasions fowre belchings, hunger, a gnawing pain in the Stomach, most terrible Colicks, with Wind and even Convulsions in the Guts; a sluggishness of the Bilis, and many changes and alterations of the same; it renders the Chyle fowre, and the very Excrements by Stool stink fowrish: These are its Effects in the Stomach and in the Guts.

64. When got into the Blood, it causeth it to look pale, and turns the Serum newly come out of the Chyle fowre; it makes the very Spittle fowre; from hence Itchings, Obstructions, Pimples, Ulcers, Coagulations of the Blood made unable to circulate; afterwards prickings of the Brain and the Nerves, from whence Convulsions, the whole Circulation of all the Humors interrupted, and lastly Death it self.

65. From these described from 60 to 65. one may have a certain Knowledge, when this acid Acrimony is present, coming, or past; hence also are seen its Effects; and may the Cure be conceived.

66. Which is effected, 1. With Aliments as destroy Sourness whether taken from Animals or the vegetable Kind. 2. With Juices like unto well-conditioned Blood, which one may find in Birds of prey. 3. Strengtheners. 4. With a strong Motion. 5. With Medicines as do absorb and

soak in the Acids, as dilute them, as blunts the Edges of them, and changes 'em.

67. Whereof the Choice, Preparation, Dose, and timely Application are known to the Physician from the knowledge of the Disease, its Seat, the Patient's person and constitution, and many more Circumstances.

68. From hence it appears, why the Diseases of this Kind are so common to Children, to Slothful people, to Poor people and certain Tradesmen; whereupon consult *Ramazzini de Morbis artificum*.

Diseases from a spontaneous Grew.

69. The Glutinous fat Humors from Vegetables is occasioned, 1. By crude and mealy Aliments, and by unripe rough Fruits. 2. By a want of good Blood. 3. By a Weakness of the Vessels, of the Entrails and of the Choler. 4. By the lessening of the Animal Motion. 5. By a dissipation of the most fluid Parts of the Blood through the relaxed secretory Vessels. 6. By the Retention of the thicker parts of the Blood and Humors from the weakness of those Vessels and Instruments as shou'd thrust them out.

70. It appears first in the first Digesters, from hence it flows into the Blood, and afterwards in all the other Liquids that are derived from the Blood.

71. In the first Passages it occasions a prostrate Appetite, a feeling of Fulness; a Nauseating, Vomitings, want of Digestion; a sluggishness of the Choler, its growing slimy and consuming; it breeds nasty Phlegms in the Stomach and Guts;
binds

binds up and swells the Belly ; hinders the making, the perfecting and the separating of the Chyle into the Milk-vessels.

72. In the Blood it produceth a toughness and a paleness, making its Circulation almost impossible ; in the Vessels Obstructions, Concretions ; a pale Urine with scarce any Smell ; a slow Spittle ; a white Swelling ; and almost all the animal Secretions obstructed ; a defect of the finest Juices ; and from all these the smallest Vessels do shut up and grow together.

73. From hence are all the Coctions, Circulations, Secretions, Excretions, all the Vital, Natural, and Animal Motions disorder'd, from whence Choakings and Death.

74. From these (69. to 73.) appear the Diagnostic, the Prognostic, and the remembrance of this Disease ; nor can it be difficult to conclude what must be necessary towards the Cure.

75. Which may be obtained, 1. With using a Diet of things that have fermented well, and are seasoned with Salt and Spices. 2. With Broath made of Volatiles. With whatever may strengthen the Vessels and Bowels. 4. With a gradual increase of Motion and Exercise. 5. With diluting, resolving, stimulating Medicines, such as carry along with them wherewithal to supply the want of Choler, and are of a soapy Nature. 6. With Frictions, Heat, Baths, and Blisterings.

Distempers of a Spontaneous Alkali.

76. Some Plants abound in a matter, which, if putrefied of its own accord, doth not turn into

an acid Substance, nor run together, but melts away into a stinking fat Alkali : Such are most all aromattick Plants as have a very sharp taste : But it's very seldom that so much is taken of them as will from its peculiar nature create an illness : But if it shou'd happen, that Disease ought to be ranked among those occasioned by a sharp and oleous Alkali.

77. Our Juices formed from the feeding upon Meat must vary, 1. According to the Food as the Beasts were fed with. 2. According to the different parts we eat of them.

78. For those Animals which feed upon Herbs and Water make a Chyle either sowrish or easily turning so, and consequently give Milk of the same nature, which being taken for Food by us, must needs preserve the same Nature as if we our selves had fed upon those Herbs and Waters, and creates commonly in our Stomachs, and first Passages, a ropy Matter like unto new Cheese.

79. Those that feed upon Animals of another Kind, their Juices turn easily into an Alkali.

80. When Aliments with the strength of our Bodies are so far attenuated as to be converted into Liquors, such as have been found in healthy and strong Bodies in four and twenty Hours from the taking of Nourishment ; If the same are left to themselves in a warm place undisturbed, or are violently shook, they'll always acquire the Nature of that beginning Putrefaction.

81. But in Aliments from other Animals this disposition to a sudden Putrefaction is there already

dy of its own accord without needing that alteration which they undergo in our Bodies.

82. This Corruption indicates that state of the Humors, which obligeth the watry Parts to exhale; the saline Matter being attenuated, deprived of its Acid, or even altered, to grow sharp, volatil and of an alcali Nature; The oily Part also being thinner in one Part, deprived of its Earth, mixed with that sharp Salt, groweth harsh, volatile, and stinking: But t'other part of the Oyl being most firmly united with that Earth, which was deprived of its Water, Salt and the first mentioned Oyl turns into black, thick Dreggs incapable of flowing.

83. Insects, Fishes, amphibious Creatures, Birds, Beasts of all Kinds, and Reptiles, and even Man himself do of their own Nature, when dead, all turn into that Corruption just now described.

84. The Causes which makes this Corruption to follow are, 1. Aliments from living Creatures (except the Milk of grazing Cattle) chiefly from Insects, Fishes, Birds of prey, and such Vegetables as are apt to turn into an Alkali. 2. A fulness either of good Blood, or of such as was already tending to Corruption. 3. A great strength of the Vessels, of the Bowels and of Choler. 4. A standing or stopping of the Fluids, or too great a hurry of the same at the animal Motions being either too quick or too slow.

85. In the first Passage it occasions Thirst, loss of Appetite, stinking Belches; it fills the Mouth, Tongue, Palate and Throat with bitter stinking Filth; it creates nauseousness and vomitings of

corrupt bilious Matter; a stinking Crudity; a Looseness with much Choler, inflammatory iliac Pains, and a very troublesome Heat.

86. When carried into the Blood it occasions it to be dissolved into a putrid Mass, it creates there an Alkali, oleous, volatil Acrimony; it renders it unfit for nutrition, it makes it apt to consume, destroys the least Vessels, and so on; disturbs, confounds and undoth all the Functions of the solid and fluid Parts; so that the circulation, secretion, and excretion of Humors keep no longer their Course; and there succeeds burning hot Fevers, the Urine and all the separated Juices become fætid and rotten, comes on Inflammations, Imposthumes, Gangrenes, Mortifications, and at last Death it self.

87. From what has been said (from 76. to 86.) one may again know, prognosticate, and even find out the Method to cure this Distemper easily.

88. The Cure may be obtained by, 1. Aliments as will speedily grow sowre, or such as are acid already; such are all sorts of mealy Eatables boyl'd in Water, or being left to ferment till they begin to corrupt; Milk and all that can be made from it, carrying along with it the Quality of the Herb; all ripe Fruits, the Juices thereof whether raw or fermented and sowred; such as Cyder and Perry. 2. Acid Medicines from the raw Vegetables, or fermented, or from Salts and Brimstone converted into Acids by the strength of Fire. 3. Such Salts as do devour the Alkali, as Sal Gem, Sea-salt and Nitre. 4. Watry Diluters. 5. Such as gently do blunt, as Emulsions made of the

the Seeds of Vegetables, or Decoctions of the same. 6. Soapy cleansing Medicines mix'd of Acids and Oyls; Oxymel, and acid Conserves and Extracts. 7. Lastly by Rest, Sleep, Steam-bath or Fomentations.

89. From whence it appears, where and why fowre Belchings are good succeeding stinking Belches. Why and what recovering People do complain of a troublesome Taste of Salt Ammoniac? Why it is a good Sign in accute Diseases when the Patients Sweat smells fowre? What sort of Acrimony it is, which ought to be called Acid, which are Alcaline, Bilious or Oleous?

90. Hence lastly may be known, what harm doth the too great or the too little Motion of the circulating Fluids; and how much its Consequences and Effects vary according to the variety of Places, where they stop, and of the Humours upon which it operates: What Damages from a stopping Humour, and what from extravasated and lurking.

91. Having considered all the several Diseases of the Solids and the Fluids (as were the Simplest) severally; follows now to treat of those, which occur together both in the Solids and in the Fluids, beginning also with the Simplest.

Of Diseases acknowledging no other Cause besides the too quick circulatory Motion.

92. All the Fluids which are contained in any Vessel, that has its rise from the great Artery, are separated from that Blood only, which a little while before was thoroughly united and mixed in

the right and left Ventricles of the Heart, carrying no other Face than of one even and homogeneous Liquor.

93. It has notwithstanding already in those very Places some Globules greater than others, of a particular Size, of a changeable Figure, of a red Colour; and a transparent Water, lighter, thinner, of smaller Particles, but because of their transparency hardly distinguishable from each other. The first is called *Gore*, and the latter *Serum*. Magnifying-glasses have demonstrated both.

94. The red Gore being settled and separated from the Serum in another Vessel, is from its lying still only, and the looseness of its Parts resolved also into Serum, which seems at last to be the true first Principle of the whole Mass of Blood.

95. The Serum being long kept in a moderate warm and moist Air, from lying still, and the looseness of its Texture is resolved into a thinner, lighter, and more transparent Liquid. Which is more so, according to the Time it hath been deprived of Motion, &c.

96. The whole Blood by means of a small Heat, little more than what is healthful, and of little exhalations, runs together into a solid Mass separable with a Knife, not resolvable by Water, Salt, Oyl nor Spirits. And the same peculiar sort of Concretion will befall the Blood by a degree of Heat just mentioned tho' convey'd into it by moist Bodies.

97. The redness and the running together of the Serum in the Blood is owing to the Action of the Vessels and to the power of Circulation; as is shewn

shewn from the change of the Chyle, Milk and Blood, and is confirmed by the Observations made with Microscopes.

98. The increase of the Motion of the Blood through the Vessels, proceeds from the Heart's being oftner and stronger contracted.

99. The Heart is oftner and stronger contracted. 1. When the Brain and its production the little Brain are so strongly pressed as to send forth too great a Quantity of the nervous Juice, as it hapneth in the passions of the Mind or in Pains. 2. When the Heart it self is irritated by occasioning the returning Blood through the Veins to run quicker than usual, being push'd on by rubbing or the action of the Muscles; or by some sharpness being present in the Blood, whether aromatic, saline, acid, alcali, purulent, ichorous, or putrefied.

100. The Motion of the Blood being increased in the Vessels, occasions the Blood to run stronger upon and towards the Vessels, which are to receive the same; a stronger resistance of the Vessels against the Blood; a strong pressure of the Blood upon the sides of the Vessels, a violent rubbing of the Vessels and the Blood against each other; a strong rubbing of the several parts of the Blood among each other; a greater Heat of the whole, a drying up of the Blood from the dissipating of the most thin watry Particles; a growing Toughness of the same, easily settling and inflaming; a breaking of the Blood into sharp and volatile Salts and Oyls; The Mouths of the Vessels at their beginnings becoming wider, a forcing of the thickned

thickned Juices into the smaller Vessels: The following Obstructions of the same hereupon, Destructions, Inflammations, conversion into Pus, Gangrenes, Mortifications, or if in glandular Parts, into hardnesses called Schirri, and innumerable more Ills, which follow from all these.

101. The increase of the Circulation therefore is known from its Causes (99.) and its Effects (100.) but chiefly from a quick Pulse, and a hard beating of the Artery; from a swift and laborious breathing, and a great Heat.

102. The Remedies therefore for to restrain the too violent Motion of the Humours are the same, as are able and must needs lessen the too frequent and strong Contraction of the Heart.

103. Whereof the first regard the Mind, the latter the bodily Faculties.

104. The first are such as will allay and moderate great Passions by reasoning, by either causing contrary Passions or Diversions from the same by any Method.

105. The latter operates by causing the Muscles to keep quiet, by loosening the Veins in all such Manners as have been mentioned (54.) by asswaging the sharpness of any kind with proper Remedies, either diluting or blunting the edges of it (66, 67, 68.) and by removing the Causes of Pain.

Of Distempers from the defects of Circulation and a Plethora.

106. The Diseases proceeding from the defects of circulation in the Humours, are very near the same

same with such as were occasioned by the spontaneous stopping of the same from (58, to 80.) so that one must look back to them for to know them and to obtain a Cure. And from all these one may easily understand what is meant by a *Plethora*, and know its Causes, Effects, Signs, and Remedies, chiefly if the following Things be well minded,

α. A Plethora is a greater quantity of well conditioned Blood, than what will undergo those Changes, which in Life are unavoidable, unless Distempers intervene, and disturbs them.

β. The same is created by every thing as maketh a great Quantity of good Chyle and Blood, and at the same time hindereth their attenuation, consumption and perspiration through the Pores of the Skin.

γ. Hereto refer a great power of the Bowels which are employed in the Chylification to strain themselves, which is also in the Heart and Arteries; and at the same time a looser Texture in the Veins and other small Vessels: Hereto contribute also such soft Aliments as are easily converted into Chyle; much Sleep; an easie Mind; a rest of the Muscles, a habit of Bleeding, whether naturally or with the Launcet.

δ. The Effects of a Plethora proceed altogether from that sort of inward Motion of the Blood and Juices, which doth not come up to a Fermentation, and which we call a *Rarefaction*, and from the Heat occasioned thereby: From hence a Dilation or a widening of the Blood and lymphatic Arteries; the change and interruption of the Secretion,

eretion; a compression of all the Veins, both them as carry back the Lympha, and such as carry the Blood; a stifling of what shou'd circulate; Inflammations; a breaking of the Vessels; Imposthumes; Gangrenes and then Death.

ε. So that it is easie to know when this Disease is present, and to foresee the Effects of it.

ζ. The Cure is performed, by letting of Blood; Exercise and Waking; by a more sharp Dyet after due Evacuations; and leaving them off gradually.

Diseases the least Compound, Obstructions and Wounds.

107. An Obstruction is the shutting up of a Canal, and denying the Passage to a Liquid which should go and flow through the same; whether it be vital, sound or depraved; proceeding from the size of the Matter that should pass, exceeding the Cavity of the Canal through which it should be let pass.

108. Which may again proceed from the narrowness of the Vessel, the bigness of the presenting Body, or both happening together.

109. The Vessel may become too narrow if outwardly pressed; if it contracts it self, or if the sides of the Vessel grow thicker.

110. The bulk of the small Bodies grows too big, either by the slyminess of the Fluid, or by having mistaken their Passage.

111. When these two meet together, the Obstruction is the more obstinate and difficult to remove.

112. The

112. The Vessels may be pressed outwardly.

1. By a neighbouring Tumor from fulness, which is inflamed, full of Matter, Schirrous, Cancerous, Pituitous, pufft up in the form of a Bottle, from a distended Arterie called *Aneurisma*, or a Vein called *Varix*; by knobs in the Bones or Callosities, or some Slyme or Stones.

2. By some hard and solid Parts, such as Bones being broke, disjointed, distorted, or drawn out of their natural Position, and so pressing upon the neighbouring softer Parts, as must give way.

3. By any Cause, which draws the Vessels too much and makes 'em longer, whether it be a Tumour, or the pressure of a part out of its due Position, or any external pulling Agent.

4. By external Causes out of the Body, such are too narrow Cloaths, Girdles, the weight of the Body resting too much upon one Part, Ligatures, &c. Here also belongs the moving, the rubbing, the embracing of other Bodies too eagerly with some particular Part.

113. When that Contraction which is peculiar to each Vessel is increased, chiefly such as have winding Fibres, and also such as have them long, the cavity of the Vessel is made narrow, and proceeds 1. From any cause which doth increase the elastick power of the Fibre, of the Vessel and of the Bowel, mentioned (31, 36, 40, 50, 51.)

2. From a Tumour of them lesser Vessels, out of which the sides of the large ones and the Canals are form'd, when too much filled.

3. From the lessening of the Cause, which extends the Vessels, whether it be emptiness or floath-

fulness: From whence follows that the Canals being cut assunder will soon stop the running out of their proper Fluid.

114. The thickness is encreased in the very Membrane of the Vessel, 1. By any Tumour (112. No. 1.) in any of those Vessels whose union and contexture makes up the Membrane. 2. By Callosities grown there; whether cartilagineous, membranous or even osseous (51.)

115. The bulk of the fluid Parts is increased to that Degree as to be incapable of flowing, 1. Either by changing their spherical Figure into another, presenting it self in a larger Size to the Mouth of the Canal. 2. Or by the joining together into one several; which were single before.

116. The Figure is chiefly altered, when that even pressure of the smallest Particles, now left to their own elasticity, which used to work and to press from all sides together and equally, is ceased; that is when Motion is become languid, or the Vessel loosened, or the quantity of the Liquid is lessened.

117. The small Particles run into one, by too great a rest, cold, frost, drying, heat, a violent circular Motion, and the pressing of a strong Vessel; by an acid, austere, spirituous or absorbing Coagulum, by a Slyme or an Oyl.

118. The Particles of Fluids having mistaken their Passage are stopt, when a small Body of them runs into the dilated Mouth of a Canal, the Extremities whereof they cannot pass. This Dilatation is chiefly created by a fullness, an increased Motion, a rarefaction of the Fluid, a relaxation of

of the Vessel ; and most of all, if these have preceded, the contraries most commonly follow soon after. *Which is the most immediate Cause of all Colds.*

119. Hence are manifest the causes and nature of all Obstructions whatsoever.

120. Which happening in a living Body hindreth the Passage of such Matters as shou'd flow on ; they stop as many as runs in upon 'em ; they receive their shock ; the thinnest Parts are squee's'd out ; the thicker run into one Mass ; the Vessel is extended, dilated, made thinner, dissolv'd ; the stagnating Liquor is thickned ; the function depending from the regular flux of the Liquid is destroy'd ; the Vessels which were to be supply'd from thence run empty, and dry ; the Vessels are less and less able to transmit their Liquids : The quantity of Liquids in the Vessels free from this Obstruction increases, and so doth the quickness of the Motion ; and consequently produces all the Ills which may be occasioned thereby.

121. Hence according to the difference of the Vessel obstructed and of the Matter causing the Obstruction do those Effects (120.) appear accompanied by different Symptoms.

122. In arterious Blood-Vessels are produced Inflammations of the first Kind : In the lymphatic Arteries dilated Inflammations of the second Kind ; in the larger Lymphatics pituitous Swellings ; in the lesser Lymphatics Pains without any apparent Tumour ; and different are the Effects of Obstructions in the producers of Fat, in the Vessels of the Bones, of the Marrow, of the Nerves, and of Choler.

123. So

123. So that whoever knows what has been said from 107, to 723. of the nature, the matter, the causes and effects of Obstructions, he cannot be ignorant of the Signs of an approaching or already present Obstruction and the Effects thereof.

124. And if once he knows the different Sorts thereof, it will not be very difficult for him to find out the proper Cure and the Means thereof.

125. For that Obstruction which ariseth from an external Pressure (112.) requireth the removing of whatever is the cause of that Pressure, which, were it possible, must be taken from its Description to follow hereafter.

126. But that, which ariseth from the increased contraction of the Fibres, is known from the Signs, which shew the contraction of the Bowel, of the Vessel and of the Fibre (34, 36, 40, 50, 53.) And so is that known, where that Contraction proceeds from the second Cause (113. No. 2.) viz. Tumours in the small Vessels which constitute the Membrane of the Canal; and also the latter, which is occasioned by a contracting of the Vessel, after a great loss of Blood or Fluid proper to the Vessel.

127. This Obstruction described (113, 126.) is cured, 1. By such Remedies as will correct the too great contraction of the Fibre, of the Vessel and of the Entrail. (35, 36, 38, 54, 55.) 2. Chiefly if they can be applied to the very Part affected, and their Virtue communicated; and chiefly by Steams, Fomentations, Bathings, Liniments, or Plaisters. 3. By such helps, as will empty the Vef-

Vessels of the Membranes, when too much distended and fill'd. Whereto belong all Evacuations in general, but chiefly such as can be applied to these same Vessels; Such are the loosening, diluting, resolving, attenuating, cleansing, evacuating Medicines. 4. By such as are capable to melt and dissolve a Callosity already created.

128. But this latter Sort of Obstruction can seldom if ever be cured. Emollient and opening Medicines are the Chief: from whence it follows that the Animal cannot avoid dying; And that it is matter of very great difficulty to procure a long Life even with the help of the most proper and best applied Medicines.

129. When the Fluid is become incapable of passing through, which proceeds from the loss of its Spherical Figure, it is known from looking into the Causes thereof (116.) for they are mostly apparent to the Eye, or the helping Glass.

139. This Obstruction is cured with the help of such Remedies as do restore that Figure to the Fluid; which are such as increase their Motion through the Vessels and Bowels; Such are also most all stimulating and strengthening Medicines; And lastly, an increase of the animal Motion.

131. And whereas the too great thickness of the Liquid, and its tenacity proceeds from so many and so widely different Causes, (117.) They require therefore different Methods of Cure, and different Remedies according to their Nature; which difference being enquired into in each par-

ticular Disease, will indicate its proper and peculiar Remedies and Applications.

132. But the thickness of the Liquids in general is remedied, 1. By inducing an alternative Motion in the Vessels. 2. By diluting. 3. By an attenuating Liquor being carried into it, mixed and moved with it. 4. By fetching out or evacuating the Cause which did coagulate, and thicken.

133. Those things will bring an alternative Motion in the Vessel, 1. Which do temperate whatever occasioned the too great distension of the Vessel. Such is Bleeding. 2. Which do strengthen the Vessels (28, 29. 45, 46, 47. 49.) 3. Rubbings, and the Motion of the Muscle. 4. Stimulating Medicines.

134. *Diluting* may be performed by warm Water chiefly if drank in great Quantity, if injected by way of Glysters, or the Steams thereof be received, if applied outwardly to the Part, and as much as possible be drove to the Part where the Obstruction is, and wants to be removed. Hereto belong such as turn another way, as draw on, and push forwards.

135. The following Things do *Attenuate*, 1. Water. 2. Common Salt, Sal Gemm, Armoniac, Nitre, Borax, fix'd or volatil Alkali. 3. Natural Soaps consisting of an Alkali and an Oyl; or compound, footy, volatil, fix'd, or Choler itself. 4. Mercurial Preparations. Which may be convey'd to the place affected, by such as turn the Humor another way, such as draw and push towards it.

136. The Coagulating and Thickning Cause is fetch'd out by drawing of another Liquor whose drawing power is stronger. Thus the Acids work upon the Alcalis, the Oyls upon the Alcalis, &c. which are chiefly found out from Experiments in Chymie.

137. But when a Liquid is got into a wrong and strange place, and cannot clear its Passage, and so forms Obstructions, then are many and very malignant Diseases created; so that this Ill ought and deserveth to be most carefully minded.

138. We know this to be the Case. 1. If we are acquainted that its Causes (118.) have preceded, which are generally easily noted. 2. That the Contrary Operations have soon after followed. 3. If we see its Effects very distinctly, as set down (120, 121, 122.)

139. And it is also easie to foretel what will be the Consequence of this Ill, if we look back to 120. to 123.

140. The Cure is perform'd, 1. By pushing the obstructed Matter backwards by a retrograde Motion into the larger Vessels. 2. By resolving the same. 3. relaxing the Vessel. 4. or suppurating the Matter it self.

141. This Matter may be brought back again from its Prison, 1. By evacuating the Liquor, which is pressing in upon it and driving it in closer; viz. a large, and sudden opening of a Vein, which will occasion a Straining in the very Vessel obstructed, and so the Matter will be push'd back again. 2. By Rubbings from the Extremities to the Mouth of the Vessel.

142. It may be resolved by Medicines named above from (133. to 137.)

143. The Vessels may be made looser by means mentioned in (35, 36. 54.)

144. Of the Manner of promoting Suppuration, or the turning into Pus or Matter, we shall speak more at large when we come to treat of Inflammations.

Of Wounds in General.

145. A Wound is the Separation of the Union of soft Parts by hard and sharp Bodies.

146. The sensible and mechanical Cause therefore is the hardness, the sharpness, and the motion of the wounding Instrument.

147. The Receiver must be a soft Part, consequently a knot or contexture of Blood-vessels, Lymphatics, such as are adipous, nervous, membranous, tendinous, and lastly full of such little Bladders as are made of them.

148. In which Receiver the Instrument causes a Separation of what was united, and the shedding of the contain'd Liquids.

149. So that it disturbs the Actions, which depend from the integrity, wholeness of those Parts, and from a determin'd Course of those Liquors through the Vessels.

150. All Wounds therefore as invade such Parts, whereof the wholeness is necessary to make Life subsist, are call'd *Mortal*.

151. Of these there are such as occasion Death unavoidably.

152. Others

152. Others, if left to themselves, occasion Death; But may so far be remedied by the Art of Surgery, that the danger of Death ceaseth.

153. Lastly, some Wounds may become or be made mortal, which were not so of their own nature when neglected, or when wrong Applications are made to 'em.

154. According to the different Actions, which were before performed by the whole and unwounded Parts, do arise the several other Effects of Wounds, and acquire from thence their several Names, which are seldom unknown to any one acquainted with the Functions of the several Parts of the sound Body.

155. Nor is the difference of Names, Forms, and Effects of the several Wounds less, from the different Cause or Weapon occasioning or giving the Wound, from the difference of its Shape, manner of Assault, either by pointing, cutting, hewing, or by moving to and fro; from the degree of Strength in driving in and removing out of the Wound, the time of its remaining there, and the poisonous quality of the same.

156. These again vary according to the difference of each Part receiving the Wound, its hardness, softness, connexion, situation, effect, the several Liquids thereto flowing, and the great change in its Shape.

157. Though it is necessary to know exactly well all the many and different Beginnings of it, yet is there little occasion to dwell here upon a nice History of its several Names.

158. If a Wound is made in a healthy and strong Body, in a visible place, not containing any large Artery; nor very tendinous, the following Symptoms arise.

1. The Parts, between which the wounding Instrument has been thrust, do part gradually more and more asunder, notwithstanding the Instrument be removed; unless it be a very small puncture.

2. The Blood runs out at first with Violence, and stops afterwards gradually of it self.

3. Then grows a bloody crust in at the hollow of the Wounds.

4. And a thin Liquor, somewhat reddish and faint-colour'd flows out of the separated Fibres.

5. Now begin the Lips of the Wound to grow red, hot, painful, to swell and to turn back.

6. At the same time the Patient grows sensible of a little Fever, with heat and thirst.

7. About the third or fourth Day, sooner or later begin to appear in the Wound a sticking Liquor, white, fattish, even, which we call *Pus* or *Matter*.

8. At the same time you find the redness, heat, pain, swelling, the drawing or turning of the Lips, and the Fever either to cease entirely or to relent.

9. And by degrees the hollow of the Wound is fill'd with growing Flesh from the bottom upwards, and from the circumference to the Center; the Brims getting together by means of a white, bluish, soft and even Substance.

10. Lastly,

10. Lastly, the Wound is dry'd up, and cover'd over with a Scar.

159. If an Artery (not of a very large Diameter) not too near the Heart, is entirely cut asunder, it shrinks back and hides it self among its neighbouring Solids, and so stops up its own self, and then follow all what has been mentioned (158.) just now.

160. If the same is wounded a-cross but not entirely cut asunder, the Wound is made wider through the pulling of the Fibres, from whence an incessant Loss of Blood, and after that is stopped, an *Aneurisme* from the thinness of the Skin growing over the Wound, which for that Reason gives way, and is extended into the shape and nature of a Bag.

161. If a large Arterie be entirely cut asunder, there follows an incessant bleeding until Swooning or Death; the Parts below the Arterie fall away, and are at last consumed by an ugly but slow Gangrene.

162. If any Nerves be entirely cut asunder they shrink back, hide themselves, draw the Branches that are a little above the Wound, stretch them, create in the neighbouring Parts Obstructions and Pain; and as to the Parts below the Wound, they become insensible, immovable, and waste away.

163. Nerves that are prick'd or half cut asunder, create Pains which at first are sometimes dull and sometimes very quick and acute; first in the wounded place it self, and then in all the adjoining and neighbouring Nerves; from hence Heats,

Tumours, Rednesses widely spreading, Fevers, a Delirium, Convulsions, an Inflammation; an opening of the inflamed Part with a running of a sharp, thin, and often copious Serum; afterwards follow the loss of Feeling, a Stiffness, a Drying up, and Unmoveableness of the Part, or otherways a Gangrene and Death.

164. All which (162, 163.) with very little difference happen in the wounded Tendons.

165. And the Membranes are subject to the same Disasters, as being mostly Compounds and Products of Nerves and Tendons.

166. What Lymphatic Vessels, such as contain Fat, and the Veins and small Bladders do undergo in Wounds, what they will occasion, is easily understood from the Laws of Circulation, and by considering the nature of their Neighbourhood.

167. If the Wound lyeth open to view, it is soon known to be, and its Nature is also soon understood. 1. By the Sight it self, having removed what covered it, and having stop'd the running and loss of Blood. 2. By having an Anatomical Knowledge of the neighbouring Parts.

168. But the presence of a hidden Wound and its Nature are known, 1. From Anatomical Knowledge, from the position the Patient was in, when he receiv'd the Wound, from the manner and strength wherewith it was given. 2. From the defect of the Function following the Wound. 3. From the discharge of the Wound, whether within or without the Body. 4. From the consequent Symptoms, such as Pain, Hiccough, Convulsion, Tumour, &c.

169. From knowing (167, 168.) it is easie to foretell the Events.

1. Whether the wounded Patient will live or die.

2. Whether the Cures be possible or impossible, entire or only in part.

3. Whether the Cure be easie, or difficult, like to be long or short.

4. What effects from the Wound will remain after the Cure; whether a wasting, numness, stiffness and unmoveableness, the Figure spoil'd.

170. Unavoidable Death from a Wound follows from five Effects, and consequently before a Jury such must be called mortal Wounds,

1. As cut off the Influx of the nervous Juice from the hind Brain to the Heart. α . The Wounds of the little or hind Brain called *Cerebellum*, and such of the Brain as are deep enough to inflict a great Wound in the long marrow *Medulla oblongata*. β . The Blood-Vessels within the Skul being broke with an effusion of Blood, which kills either by pressing hard or by putrifying there, when it cannot be taken out by means of Trepanning by reason of the Place where that Operation cannot be performed; which are chiefly the *Fontanelle* of the Head in Children; the Sutures, the superciliary Sinus, the Temples, the inferior parts of the Head, &c. γ . Deep Wounds in the Marrow of the Back-bone near the Neck. δ . And lastly, such as cut off the Nerves of the Heart, call'd *Nervi Cardiaci*.

2. Such as occasion the Blood of the Heart to rush forth through the Orifices of its pierc'd Ventricles

tricles: So that all Wounds of the Heart deep enough to penetrate into either of its Ventracles are mortal.

3. Such as turn off the Blood from the Heart, from the Brain and little Brain, either into the Cavities of the Body or out of the Body it self, and cannot be healed because of their Situation. Such are the large Wounds in the Lungs, Liver, Spleen, Kidneys, Pancreas, Mesentery, Stomach and Guts; of the Womb in pregnant Women, of the Bladder near its large Arteries; of the Aorta, the Carotick and vertebral Arteries, and other Arteries and Veins of the like Importance and difficult Access.

4. Such as intercept Respiration or Breathing intirely, as the cutting of the Larinx when the separated Pipe is withdrawn; large Wounds of the Bronchia, of both the Cavities of the Chest letting in the Air, of the Diaphragme penetrating through both sides of the Mediastinum of the Chest, or cutting its Sinews asunder.

5. Such as hinder the Motion of the Chyle towards the Heart; as the cutting through of the Gullet, large Wounds in the Stomach, of the thin Guts chiefly, if cut through at the Beginning; a Wound in the *Thoracick duct* or Cystern of the Chyle.

171. Wounds, of their own Nature mortal, but curable by Art, are as follows, and may be reported as such:

1. Wounds of the Brain that are com'attable by trepanning.

2. Wounds

2. Wounds of large Arteries or Veins situated so as to admit the Hand and Application of the Surgeon.

3. Wounds of Bowels, where the Hand and Medicines may not only be applied but also retained long enough to heal them.

4. Such as kill by letting out their Liquids into such Cavities from whence they may be taken out without endangering Life; as the Chest, the lower Belly, the Ureters, Bladder and some Wounds of the Guts. N. B. 'A Cure of this last mentioned was very lately performed by a Surgeon * of St. Anns * *Brownbill.* Parish, *Westminster*, on the Body of a Captain of his Majesty's Guards.

172. One may foretell a Wound shall be mortal, which was not such of its own Nature, from these Causes,

1. From omitting the cleansing and taking out of extravasated Pus, from whence a Wasting; or the leaving of extravasated Blood in such Cavities, where it must needs putrify.

2. From Errors committed in the Non-naturals; of which see our Author's Institutions at large, lately made *English*.

3. From a neglect or a mistake of the Surgeon.

4. From the natural or sickly Constitution of the Patient.

173. From these may be fetch'd Depositions of Surgeons concerning Wounds, and judge of the Time within which they'll prove mortal or kill actually.

174. Hence a Declaration may be made on Wounds, and a probable Estimate given of the Time of their mortality.

175. But the different Symptoms (159, 159.) as to their Causes are easily known to any one, who understands how and with what Instrument the vital and animal Functions are perform'd. Look back to what has been premised of the Diseases of the Solids and Fluids.

176. When the outward Coat of an Arterie (the inward remaining entire) is either prick'd, cut, bruised, drawn asunder, or corroded, the Arterie through the force of the Blood is dilated and forms a Purse or Bag, which by degrees will grow to the bigness of an Egg; acquireth Sides or Membranes, which at length grow callous; the same beats strong, in proportion to its Size; shines with a reddish Colour; if squeezed it disappears, the Blood retiring into its natural Channel the Arterie, and comes again when pressing is discontinued; it makes its Arterie wider; and the neighbouring Vessels, by pressing upon 'em, narrower: This is call'd a *true Aneurisme* (160.) whereof the Cause, Signs, and Effects are plainly discovered.

177. If an Arterie is wounded by the same Causes, and is not well enough consolidated, the same Effects will follow as in (176.)

178. When from the same Causes all the Coats of an Arterie are broke at once, and let out its Blood into the next extended Parts without voiding the same; there is soon made a Swelling from the collection of the extravasated Blood still encreasing without measure, which Swelling is soft, hardly beating, the Skin livid, scarce giving way when pressed, soon rotting, and soon occasioning

ing a Gangrene of the adjacent Parts. This is *the Spurious Aneurisme* (160.) whereof the Cause, Signs and Effects are easily known from this very Description.

179. Other effects from the cutting of a large Artery are soon known out of the Physiology as well as the Signs and Effects which appear immediately upon the cutting of a Nerve asunder, (161, 162.)

180. But that we may have just and clear Notions whence the stupendous Effects proceed of the prick'd or half-divided Nerves, as in (163, 164, 165.) We must consider what follows, fetch'd from the knowledge of Anatomy and the Animal Œconomy.

181. Every Nerve that is visible is a small bundle of less Nerves ty'd together by small Skins, Arteries, Veins, and interwoven Lymphatics, which afterwards are all covered over with one common Membrane. Through all these little Vessels as make up the Nerve, there flows continually a Liquor proper to each Channel, from the Heart, Brain, *Cerebellum* and the *Medulla Spinalis*. All these have ever a pretty strong power of contracting themselves.

182. Therefore the Parts of a Nerve entirely cut asunder, do shrink back from the place where the Wound was given, towards the firm Parts to which they are annexed; they hide themselves among the adjacent and surrounding Solids, they are kept under by their pressure, their Orifices shut up together with those of all its Vessels; so that no other damage follows than what was said in (162.)

183. But

183. But if the Nerve be so cut or prick'd, that only some of the small Nerves be separated whose connexion made up the said greater Nerve, Then the separated Parts going backwards (182.) will draw the smallest Fibres which did tie the small Nerves and Vessels together (181.) so that there will be in them a continual flow tearing, and consequently a continual great and acute Pain : Now must the Parts that are still united sustain alone the whole Power which they did before in conjunction with the former, so that they must be more pull'd asunder, and tore, so that they must suffer very acute Pains, and being so violently pull'd they'll be squeezed so, as to let none of the Juices pass. While the separated Parts on one hand, and the coherent on the other are thus affected, the Vessels between both are squeezed also ; so that all is stopped in their Passage, Blood, Lympha, and Spirits ; which are drove on and heap'd up ; so that all round the Parts are produced Inflammations of the three Kinds ; the Bloody, the Lymphatic and Spirituous. Hence are all the neighbouring Nerves, Tendons, and the Sheaths of those Nerves, their Muscles, Vessels, &c. extended, stretch'd, press'd, and even convuls'd, from whence the Skins as cover the Brain, little Brain, and backbone Marrow, suffer by pullings and vellications, which disturbs all the Actions of the Brain.

From whence follows unavoidably the black list of all those terrible Symptoms summ'd up in (163, 164, 164.)

184. And it is understood which and why the pricking, tearing, and wound of the Nerves be so fatal? And also, why the Membranes, Tendons and some Vessels are subject to the same ill Symptoms.

185. That a Wound may heal, it is necessary,

1. To remove out of the same all what being left there would hinder its uniting, whether they be Liquids or Solids, corrupted, or parts of the wounding Instruments, or any other Bodies thrust in there, &c.

2. To supply the loss of Substance by procuring the growth of new.

3. To Unite the sever'd Parts, and to contain them in that union.

4. To close up the Surface of the Wound by the production of a Skin most like unto the former, and endeavouring not to leave a greater Scar than needs must be.

186. Fragments of Metals drove into a Wound, or of Stones, of Wood, of Glass, or Bullets, congealed Blood, dead Flesh, or Skins, broken Bones or Splinters; All these ought first of all to be removed, if advantageous.

187. It will be plain to the Surgeon, from the nature of the Wound duly consider'd; of the wounded Part, of the Matters therein driven, from the Strength of the Patient, from the Symptoms which may or must thereupon follow; whether he ought to leave them there till a fitter opportunity, or take 'em out.

188. From the same Circumstances doth it appear with what Instruments, and after what manner they ought to be removed.

189. The Wound thus cleans'd, if any thing has been taken away from the Substance of the Body, it ought to be fill'd up again with a Substance like unto the former. This may be done, 1. If the small Arteries, lymphatick Vessels, and Nerves are thus again placed and fastned as to receive their own proper Juices and to transmit them. 2. If that sound and natural Liquid flows in a due quantity and with a due force into those Channels.

190. For hereby (189.) will the Canals and Vessels, as were wounded, drawn back, shut up, squeezed, and most dried up, be fill'd again, moistned, extended, lengthned, applied to such others of the reticular Plexusses as are nearest; Lastly, they are glew'd together by means of good Juices.

191. And whilst all these Things are doing, (190.) from all the points of the hollow of the Wound, and with an equal Strength from both Sides and altogether, the Cavity of the Wound fills from all Sides to the Centre with a Liquid and Solid matter, like unto that which was lost.

192. Hereto therefore is required, 1. A good and convenient Diet, that the Chyle, the Serum of the Blood, and the nutritious Matter be soft, glewish, and not easily putrifying; but of an easie digesting, and converting into a good Substance. Such are chiefly Decoctions from crude or fermented mealy Seeds; Emulsions, Milk, Pottages, ripe Fruit boyl'd, soft and tasteless Garden Herbs.

193. The

193. The known constitution of the Patient ; the consideration of the Weather, Season or Custom ; the nature of the Concomitant Illness, shew which of these, and which way prepar'd ought to be chosen.

194. Every thing whose Acrimony or Sharpness doth encrease too much the Motion of the Liquids, is to be avoided. So that Salts, Aromatics, Acids, poignant Herbs and Wine, are not allowable to wounded Patients.

195. Of the same hurtful nature are all such things as are easily putrified or rotten : So that too thick and strong Broaths, and Herbs of an alkaline Nature are obnoxious, such as Radishes, the several sorts of Cresses, Cabbages, and the like.

196. Such Things also as are not easily convertible into Chyle and Blood : that is, Those things that have been salted and dried either in the Air or Smoak ; or such as have much Fat, as Lard or Pork, and fat Fishes, &c. Lastly, such as are Slimish, as most of the coarse Peas and Beans, and crude mealy Vegetables.

197. To the same end (189.) contribute such Medicines as remove the impediments of Consolidation (190, 191.) and are mostly given in the form of Decoctions or Apozems. Those are to vary according to the Nature of the Obstacles which arise in the course of Cure ; Nor is there any one yet thought of nor to be supposed, which is able to answer all Occasions, whatever some Quacks may boast of.

198. So that according to the several Occasions they are made up of attenuating, thickning, mitigating, quickning Medicines ; of such which correct by a peculiar and specifick Quality, as open, loosen, or bind ; and are consequently often of contrary Virtues.

199. The known Nature of the Patient's ill disposition, and the titles of these Remedies shew, which of them all are the properest in each particular Case.

200. A dry Air with a moderate Heat, is the Best.

201. Let the Body be kept open, by using emollient, loosening or purging Medicines.

202. Sleep ought to be procured with Anodynes, a moist soft Diet or Opiates.

203. The Patient ought to be chearful ; To abstain from all Venereal acts, and to be as quiet as possible.

204. To the end the Canals may remain in that due condition described (190.) And that the Liquids may not putrify in the Wound, whereby they would damage the Action mentioned (189, 190, 191.) The Air ought to be kept from it ; the whole Wound ought to be fomented with soft balsamick vulnerary Medicines, and to be filled up with Tents dipped in nervous Ointments, taking care not to make them so hard as to make a great pressure. NB. " Some Surgeons among the Moderns have omitted entirely the use of Tents as pernicious, and chiefly *Belloste*, in his *Hospital Surgeon*, condemns them.

205. For the which (204.) to retain in their proper places, Plaisters are of use, and that hardly in any other Sense than as they stick, and thereby keep the Lips of the Wound from going asunder.

206. The Liquids flowing towards the Wound, and falling into it, half-dead Fibres, obstructed Canals, and tumefied ones, create in the Wound Pus, a thin ill-natured ulcerous Juice called *Ichor*, nasty Matter, or spongy Flesh.

207. Which are remedied by Digestives, cleansing, corroding or drying Medicines, and often by Compresses and Squeezing.

208. These are to be applied or administered until a white, soft, glewy, smooth, and even-temper'd Pus appear, from under which all nasty Matter has been cleans'd; Bruises and Swellings have been consumed; Those that were corrupted by the Air separated; the Hollows fill'd, and the divided Parts healed up again.

209. Besides such Medicines ought to be applied, as have been of Old; and yet by many, though erroneously, said to create *Flesh*; of which kind are Gentle Digestives.

210. But if after having done all that answers the first Intention (185.) and (186. to 188.) it be found that there is no loss of Substance, the Lips of the Wound ought to be join'd so, that the Parts which were naturally united before their Separation may be again applied and stick to each other, and be retain'd in that Position.

211. The first of these is obtain'd, 1. By putting the Part in that Position, as it has naturally

out of action. 2. By a gentle and even compression of the Parts towards each other : So that they may be contiguous in their whole Surface, and remain so.

212. They may be retain'd in that Union,
1. By sticking Plaisters cut in the shape of Fingers to stick on several parts, without covering the whole Extent. 2. By such as are fixed upon the sound Parts at some distance with Loops sticking out, through which Threads are put, to draw the Lips of the Wound to each other without pressing upon them ; which are mostly used in long cuts across the Fibres of the Muscles and the Skin, or of loose Parts.

213. 2. By applying of Bolsters or Compresses, and retaining them with the several Sorts of adapted Bandages ; so that the widely gaping mouths of the Wounds may remain quiet in an even degree of pressure, and may so unite ; which is easily obtain'd by a certain and proper direction of the Pressure : This obtains particularly in Wounds which are along, not across the wounded Part.

214. 3. By Sutures with Steel Needles, which may be strait in small, but crooked in Wounds of a great depth and hollowness, their Steel must be sharp-pointed, and their Head ought to have an eye through which the Thread or String is run, and its sides should be like a small Guttur for placing of the waxed Thread, &c. they ought to be stuck in at some reasonable distance from the Wound, and as deep but not deeper than the bottom of the Wound, and is to be run through
the

the opposite Side from within outwards, having first tied the Lips of the Wound together with a Thread at several Distances, and gathering at last all the Stitches together by means of a very small Linnen Bolster : This Operation must be repeated from either the middle, or one extremity of the Wound to t'other, as occasion requireth. Then are the Lips to be anointed with Balsams, having put several small Linnen Bolsters at each knot : Lastly, the Wound is to be covered over with a Plaister.

215. This ought to be practis'd in a green and bloody Wound, yet free from a great Hemorrhagie ; in simple, full, clean, cross, oblique and angular Wounds.

They ought not to be practis'd in Wounds where there is a great flowing of Blood, nor in such as are old, sanious, purulent, foul, bruis'd, dangerous from the dammage of larger Vessels, robb'd of its proper Substance, cover'd over with Crusts, such as are too deep, much inflamed, poisoned, or situate in such Parts as must continually move.

216. 4. By a Needle remaining fixed through the Lips of the Wound, and having a Thread tied round about it, so as to hinder their going asunder, but on the contrary joining them. Which Operation is proper in great and gaping Wounds of depending Parts, such as the Hare-lips, &c. See *Dionis's Chirurgic Operat.*

217. The last end is obtain'd by taking care, that each Part do answer its opposite as exactly as it was in health, and be so kept, that they be

neither too much pressing upon each other, nor too loose; avoiding all burning, Stipticks or adstringent Applications; and above all, by pressing most evenly and equally upon all the sides and parts of the Wound. All which may be obtain'd by doing all what has been premis'd, and afterwards applying a gently drying Medicine, and concluding with cleansing the Cicatrix with spirituous Fomentations to solidate the Skin, &c.

Of Hæmorrhagies.

218. If much Blood doth issue out of the Wound occasioned by its Causes (159, 160.) it is stopp'd, 1. With a hot Iron. 2. With Caustics or Corrosives. 3. Adstringents. 4. Tying the Vessels with a Thread. 5. Cutting them asunder. 6. With Bandages and Bolsters upon the Vessels, closing their Channels.

219. A Revulsion here is of no use, unless the wounded Vessels be small, and the Patient be Plethoric. Hereto refer all what has been said of Diet and internal Medicines, whose help will come too late in this Case.

Of Pain.

220. When a nervous Fibre owing its origin to the Brain, is so much extended as to be in danger of breaking, the Notion of Pain is at hand.

221. Which is so much the Sharper as the Fibre is nearer to being broke, and so much the Slighter as the Fibre is nearest to its natural extension.

222. So

222. So that the acutest Pain can be but short in the same Part; but a small one may last long, and increase and decrease by times.

223. The Cause therefore of all Pain is that, which can occasion that Extension.

224. To which refer 1. The Natural Power of contracting being bore but by a few Fibres, whilst the others as should have bore their share are separated (183.) 2. All that distends a Vessel made up of interwoven nervous Fibres by too much repletion; hereto refer Obstructions, full Habits; abounding ill Juices; and the increased circular Motion. 3. Whatever pulls aside violently, as Disjoinings, Tumors, or External force. 4. All Wounds and Corrosives.

225. Hence one may know the many different causes of Pain in Wounds.

226. And its Effects, as Restlessness, Tossing, Waking, Fever, Heat, Dryness, Convulsions, and Gangrene are as plain.

227. And how to give Ease is known from looking into the difference of the Cause.

228. The Cause of Pain is removed, 1. By loosening the Fibres. 2. Resolving what was coagulated. 3. Lessening the Motion and Quantity of the distending Matter. 4. Remedying that uneven and violent pulling. 5. Softning the sharp Humors. 6. or discussing the same. 7. Taking out whatever doth separate or cut the Fibres.

229. The Sense of Pain may be removed, though its Cause subsists, 1. By making the Nerve incapable of feeling, by a pressure, cutting,

ting, or burning of the same. 2. By blunting the very head and fountain of all Feeling with Opiates : Which also remove several Effects proceeding from the Sense of Pain, (226.)

Of Convulsions.

230. All violent, forced or involuntary as well as alternate repeated contraction of a Muscle, is call'd a *Convulsion*.

231. Whereof the Cause is whatsoever doth push the nervous Juice alternately in the convuls'd Muscle.

232. Which therefore may exist and have its place in Wounds, whether it be a foreign Sharp irritating Matter, or the State of the very Nerve it self being wounded, as describ'd in (163, 164, 175. 183, 184.) or from a Loss of too great a quantity of Blood.

233. No less do we know its Effects, which are the Disorders of all Functions in the Body.

234. The Cure is perform'd, 1. By removing whatever doth irritate, by the skilful hand of a Surgeon (187, 188.) 2. By softning the sharp Acrimony, or dissipating it. 2. By changing the condition of the Nerves with means describ'd in (228, 229.) 4. By filling the Vessels again with a soft, friendly, and liquid Aliment, given in a small quantity, but often, 5. by stopping at the same time the loss of Blood.

235. If the Wound tumefieth and inflameth a little it is a good sign ; but if much and still encreasing it is bad. In this case do avail bathings, fomentations, anodynes, and applications of nervous Medicines

Medicines to the wounded Part, or to the whole Body of the Patient; of which hereafter when we come to treat of Inflammations and their Cure.

236. If Blood is fallen out of the Wound into any Cavity of the Body, it ought to be taken out forthwith, by placing the Body in a convenient posture for it; by sucking it through Pipes, if it be fresh, and not yet coagulated; And by either dilating the Passage towards it, or making a new and more convenient one for that purpose.

237. If the Wound penetrates into firm and adhering parts of the Body, a passage must be made to void all foul and heterogeneous matter by Pressures, Washings, Ligatures, making a new Orifice, or dilating the old one.

238. The Wound may be dilated with a Knife, putting in Lint, a Sponge, a piece of *Gentian* Root, and such like dry Things tied to a String lest they fall into the Cavity; which dilate the Wound as they imbibe the Humors and swell with them.

Of the Wounds of the Head.

239. The Wounds of the Head either injure only the outward and common Teguments; or also the *Periosteum*, the Skull, the *Dura Mater*, or even the *Pia Mater* at the same time; Or the Vessels, Substance, Cortex, Marrow and Ventricles of the Brain it self.

240. That only the outward Parts are wounded may be known, 1. From the wounding Cause and its Figure. 2. From the slightness of the Blow

Blow or Thrust, &c. 3. From the circumstances of Solidity, but chiefly Figure of the wounded Part. 4. From the slight Symptoms. 5. By looking upon and examining the same with 6. a Probe.

241. Notwithstanding they seem Slight they often become Dangerous, because of their being near some Muscles, Tendons, Sutures, the Periosteum, the Skull, Nerves, Vessels, Brain, &c. and also from the contracting Power of the wounded Part.

242. Chiefly if there be any considerable Bruise near it.

243. Or if under a small Orifice the offended Part be large and gathers foul Humors.

244. For the gathering of extravasated matter occasions wonderful Tumors, St. Anthony's Fires, pituitous Swellings, Pains, Convulsions, Putrefactions of the Bones and Periosteum, Fevers, and Death it self.

245. If therefore nothing be hurt but the Integuments of the Skull, without any of the Symptoms mentioned from 241. to 244. The Cure is easily perform'd by a fit Bandage and Application of the means from 183. to 239. Though it often carries the face of considerable Matters, and is much magnified: But above all it is of great moment in the very beginning of the Cure to take great care, to unite the Lips of the Wound exactly, to undo it seldom, and with all possible diligence then; and to ward it from all moist, loosening, or oleous Bodies.

246. But

246. But if the Symptoms of (241.) be present, the Cure and Medicines ought to vary according to the difference of the Wound and of the Part.

247. Whatever is bruised here, must be carefully digested by means of such things as either can dissipate or help Suppuration, but such always ought to be chosen as are advantageous to the Nerves and Membranes (204. 207. 245.) or they must be cut away.

248. If there is a gathering of Matter, the Wound must be dilated with the Knife, and to be cleans'd. (238. 207, 208.)

249. If the *Pericranium*, or Hairscalp, be so much wounded, that it discover the Bone for a long while, or that it putrify; the Bone is deprived of the Vessels of the *Periosteum*, and consequently of its own; the Liquor in them Stagnates, and being putrified separateth a Scale, after which the Bone grown yellow, dusky, and black, doth deposite a Leaf.

250. The Causes whereof are the Continuity of the Vessels being broke off, or the pressing of cold Air, which also dries up the Ends of the small Vessels in the Bone; No occasion therefore to accuse it of Malignancy.

251. The Effects are an Increase of all the Ills in (249.)

252. The Cure is effected, 1. By piercing the Bone as deep as its middle with a little Trepan applied to several, but near adjoining places, whereby the Exfoliation is prevented, and the *Periosteum* is made to grow again. 2. By pressing from

from thence all Pus, foul Matter, and keeping out fat watry Things and the Air; and applying several Bolsters dip'd in Tinctures of Mastich, made with Spirit of Wine, 3. By dressing the same seldom and quickly.

253. By which Method there ariseth out of all these Perforations and from all sides in a small time, as it were, a new fleshy Substance; and afterwards the rest heals, as from (245. to 248.)

254. If the Skull is wounded, according to the different Causes it may be fissur'd, fractur'd, bruis'd, depress'd or robb'd of its Substance either with or without Splintering; and all these may reach either one or both the Tables of the Cranium.

255. That the Case is thus, may be known, 1. From knowing the Strength of the Blow. 2. The Largeness of the Wound compared with the Figure of the Part. 3. Probing. 4. Putting Ink into the Wound and wiping it off. 5. A Crackling when the Patient bites upon a hard Body. 6. Seeing the Surface of the Cranium fractur'd, bruis'd and discolour'd with pale Points. 7. The very feeling. 8. The Symptoms of the Integuments; when the Flesh doth imposthume about the seventh Day; when Pains invade, the Pus grows thin and stinking, and the Wound is more than usually Malignant.

256. The Effects of this are, 1. A Mortification of the separated part of the Bone (249, to 251.) 2. An Infection of the adjacent. 3. From hence often a putrification of the whole infected Bone. 4. A rottenness of the internal Table.

5. A

5. A corruption of the Integuments of the Skull and Brain, Convulsions, Sleepiness, a Palsie, an Apoplex and Death.

257. From which (254, to 256.) any body may know this Accident, and prognosticate the Event thereof.

258. The Indications toward a Cure, are 1. The uncovering of the wounded Part. 2. Its Cleansing. 3. The Trepanning of the Bone through. 4. The re-engendring of its *Periosteum*. 5. The healing up the Wound.

259. The Part is uncovered, 1. By cutting the the Integuments through to the very Bones, and making the Incision either strait, or in the form of an V, or perpendicular, or cross-ways, or in the form of a T. This ought to be done cautiously when it is upon the fractured or loose Splinters, choosing a different way according to the difference of the place and of the hurt. 2. By separating the incised Teguments exactly with a Launcet. 3. By filling up the space with Lint.

260. The Blood, Pus, bloody matter and foulness, are suck'd up by small Sponges; the Fragments, Splinters, Scales of the Bone, if small, loose from every side of the Membrane, and lying bare to the Eye, all these are removed with Pincers, or cut away with Scissars: This you may call *an artificial Cleansing*.

261. If these are too large, sticking too fast to the quick-parts, and seated too deep, they must be left there; for they'll either separate of themselves, or grow again to the quick and whole parts. This is *the natural Cleansing*.

262. If

262. If the Bone appears bruised, white, tawny, livid, or fissur'd, it must be bored through, making several little holes here and there, as said in (252.) for through these the Live parts issue forth, very soon driving the Dead ones before them.

263. From which follows a speedy growth of a new Periosteum.

264. How to cure what remains in this case, has been described from (245, to 248. and 253.)

265. From hence it is manifest, why a small Fissure of the Scull is often more dangerous than a large Bruise, (256.)

266. And it appears also, that this Method is preferable to the Burnings, Launcings, and Trepannings of the Ancients, in all these cases mentioned in (249. 254. 256. 262.)

267. When the Scull is depress'd in Children, or in grown People after a Fracture the Brain is squeezed; and according to the different places of it thus press'd, the different bigness, depth, sharpness, and pricking of the pressing Body; are produced, a Dimness, Drowsiness, Vertigo, Tinkling, Cloudiness, Delirium, vomiting of Choler, Head-ache, Convulsions, Palsie, involuntary Stools and Urine, Apoplexies, Fevers, and Death.

268. And also when the Brain it self is thus offended, and thence corrupted by an Inflammation, Suppuration, Gangrene, Fungus, or great loss of Blood; The same Ills as just now mentioned are the necessary Consequences.

269. That the Case is such, you may know by feeling, seeing and removing the Integuments.

270. The

270. The Removal of the Pricking, the Re-stitution of the pressing Body in its natural State, the keeping it in that State absolves the Cure.

271. Therefore the soft and first uncover'd Scull of the Children is lifted up by means of a sticking Plaister ; and in grown People, if too solid for that Purpose, it is raised with an Elevator ; if the Bone gives way and is unfit for Trepanning, the Scull must be perforated next to the Fracture, so that the loose and depressed Bone may be lifted up with a proper Instrument : During the Operation it will help the Patient to sneeze and hold his Breath.

272. It will keep in this Situation by avoiding all pressing from without, by means of a convenient Bandage.

273. If in a Fissure, Fracture or Contusion of the Scull, any broken Arteries, Veins or Lymphatick Vessels have let out their Humors ; These by pressing the Brain will produce the Disorders of (267.) then putrifying into Pus, or watry Blood, they infect the tender adjacent parts of the Brain, from whence again the same Effects. These Vessels by running from the Scull into the *Dura*, and from that into the *Pia mater*, from thence into the Substance, Sinusses, and Ventricles of the Brain, occasion during the Cure many and sundry ill Symptoms more or less dangerous, according to the importance of these places.

274. A violent Convulsion of the Head will produce the same Symptoms, by breaking Vessels

sels in the Brain, or by pressing the same; Although the Scull very often be left entire.

275. These Disasters are known from their Cause, its force, the place receiving its impression; from vomiting Choler, the lessening of Sight, Hearing, Smelling, Tasting and Feeling, the same being depraved or entirely gone; from a Vertigo, Dimness, Fall, Sleepiness, Snoaring; Palsie, Convulsions, Delirium, Lethargy, Apoplexy, standing of the Hair; increase of Fever, Blood coming and gushing through the Mouth, Nostrils and Ears; and a redness of the Face and Eyes.

276. What place within the Scull is hurt may be known, 1. From the outward Appearances (249. 254 to 256. 262. 267. 269.) if there be any. 2. Having found out the affected part of the Scull by the Method in (255.) 3. From the swelling and redness of the Skin, made bare upon the application of Plaisters. 4. From the spontaneous Motion of the Patient's Hand towards the affected place, whilst he is Speechless. 5. From the Symptoms when one Side is paralytick, and t'other convuls'd.

277. Then 1. ought the extravasated Blood to be taken out immediately. 2. The infected Parts to be cleans'd. 3. The small Bones, which may stick into the Brain, to be pull'd out.

278. The extravasated Blood may be taken away, 1. By sucking it back. 2. Dissipating. 3. Trepanning of the Cranium.

279. It is suck'd back again, if by a Large bleeding in the Arm, and its Lieutenant a Purge,
it

it is drove back again into the empty'd Veins by the helping strength of Life.

280. So that both these Evacuations are immediately to be made, and that to the utmost of the Patient's strength; and if useful they are, as occasion serves, to be repeated, and again, if you find the Symptoms to grow milder and fewer.

281. The attenuated Blood is entirely dissipated, 1. By sucking back part of what is to be dissipated. (280.) 2. Attenuating by watry Dilutors, and drinking resolvent Medicines hot. 3. Applying to the shaved part Plaisters, Cataplasms, Fomentations made of nervous and cephalick Discutients. 4. Applying the same to the Ears and Nostrils.

282. Which if they do not immediately carry off or lessen the Symptoms considerably, but on the contrary, either continue as bad or grow worse: The operation of the Trepan must instantly be perform'd, to make an opening for to let out the Humors (273. 277. 1°.) and to have room for cleansing (277. N°. 2.) and pulling out the Fragments. (277. N°. 3.)

283. The place where the Trepan is to be applied, is known from the Discovery of the offended place, where it is much fitter to do it, if no Circumstances forbid it.

284. Forbidding Circumstances are, 1. Sutures. 2. Many Muscles. 3. Cavities of the *Os frontis*. 4. A large Artery inserted into the Bone. 5. The depending situation of the place. 6. A wagging of the fractur'd, bruis'd or rotten Bone. 7. The Unevenness of the Scull first rais'd and then sunk and hollow.

285. The next best place for Trepanning is the nearest to the known offended place.

286. And even if urgent Symptoms command as (273. 275.) though no certain place cou'd be assign'd (276.) Yet the Trepan must be applied first on one, and then on t'other side of the Scull, to the end mention'd in (277.)

287. The place being well marked out, and the hair shav'd off, the Teguments must be cut away and parted from the Scull, the Lips of 'em must be rais'd up, the Bone dry'd, cover'd over with Lint, the Blood stopp'd (218.) by which the Pain is eas'd, the Inflammation prevented, and if there be no urgent occasions, after the Bandage is aptly laid on, the Dressing is left on till next Day.

288. Then having secured the Head from moving, stopp'd up the Ears, and warm'd the air of the Room; the Trepan is applied to the cleansed Bone, together with its Pyramid to fix it, and it is moved with an even and equal turning with the top resting upon the Forehead of the Surgeon, till he hath entred it about half a Line deep.

289. Then taking out the Pyramid continue to saw equally, carefully cleaning from time to time both the teeth of the Trepan and the circle made in the Bone, till the Blood breaking out, the softness of the Bone, the change of the Sound in sawing, tells you that you are arrived to the division of the two Tables; which sometimes is not discernible, and therefore look'd for in vain.

290. Then

290. Then, having wash'd away the Blood, or made it run together with hot rectified Spirit of Wine, and taken out the Saw-dust carefully, turn the Trepan with the utmost Care, slowly, patiently, one or two turns round, and at every motion taking out the Sawdust, look constantly whether the Colour changes in the ras'd Circle, and whether you have penetrated equally on all sides; then leaning a little more on the least penetrated side, according to the different colour shewing it self, loosen the Bone equally evenly, so that it may cohere but a little.

291. When the Colour turns blewish and appears the same all round the Circle, and the shaking of the Piece tells you that the Scull is most entirely perforated, take out the piece with the Lever, the Myrtle Leaf or a Spoon.

292. Then smooth the Circumference of the perforated Bone with the Lenticular, take out the Saw-dust, make way and facilitate the exit of the Blood and foul Humors, which will flow out on its Surface by stopping the Nose and Mouth of the Patient, causing him to sneeze and to hold his Breath; and by repelling with the utmost Caution, and not too often, the *Dura Mater* against the Brain with the Lenticular; and then fill the Hole, and cover it over with a thin and soft Linnen, soak'd in Medicines of the nervous kind, and applying over all this a Leaden Plate, resting on the Surface of the Cranium with its Ears.

293. And afterwards the same Things are applied as were set down in the Wounds of Membranes, (from 183, to 239.)

294. And thus do the Margins of the hole in the Bone exfoliate within 40 or 50 Days, sooner or later, according to the age of the Patient, and the size of the Fracture; every Day flesh grows filling the Hole, which by degrees grows harder, and at last acquires the Solidity and the Shape of a callosity in Bones, either hollow or overtopping; In which there generally remains some Weakness and Pain.

295. The Inflammation, Imposthumation, Gangrene, or the excrescent Fungus of the Membrane, or of the Brain it self, are remedied by the same Means as have been said to be proper in these Cases, and by the application of Antiphlogistics, detergent, such as prevent Putrifications, by tying or cutting the last, and applying over them the Leaden Plates to keep that Proud-flesh under. Moreover, the Wounds of the Head are deem'd malignant, 1. From their place, which when in the hind-part of the Head, or the top, or the fore-part of the Head in Children, or on the Sutures, are the worst. 2. From their Symptoms, such as a Fever with Cold after the seventh Day and with a shaking, if the Wound looks pale, dry, livid, the bone rough, yellow; if a Palsie of one Side ensueth or Convulsions. 3. From the Patient's Age. 4. His Constitution, 5. And the Season of the Year.

296. If there appears under the *Dura Mater*, after the boring through of the Cranium, any Blood, Pus, or Foulness, the Surgeon must boldly cut through it to let those out.

The Wounds of the Thorax.

297. The Wounds made in the Chest, but not penetrating into its Cavity, are known to be such by Inspection, the Probe, the air no ways flying out, the returning of warm Water when injected into it, the Situation of the Body in the same posture as when the Wound was receiv'd, by certain and sure Signs that the Lungs do adhere to that part of the Chest where the wounding Instrument has pierc'd.

298. If these Wounds descend obliquely above or within the Ribs, it often happens, that the Pleura being eat through, they'll let down Pus into the Cavity of the Thorax, and chiefly if by any Means its passage outwardly is hindred : Thence an Empyema, which produceth many Ills.

299. A Surgeon therefore in the Cure of such a Wound ought to abstain from Tents or Pledgets, drawing Applications, or such as make too strong a Pressure ; But on the contrary ought to dress the Wounds with cleansing, balsamick Medicines, Bolsters, and a gentle Bandage and recommending an apt position of the Body to the Patient.

300. We know that the Wound doth penetrate into the Cavity of the Chest, 1. By comparing the Instrument with the largeness of the Wound. 2. By probing into the Wound after having placed the Patient in the same position as he received the Wound. 3. By bidding the Patient to draw his Breath strong whilst the Wound is kept close ;

and then shutting his Nose and Mouth close, to force the air out, as in breathing out and opening the orifice of the Wound, out of which it will then issue forth often with making a Sound from its being agitated in the hollow of the Chest.

4. By Injection. 5. By discovering an *Emphysema*; that is, an Inflation like that of Beasts which are blown up after they are kill'd. 6. By the coming out of Blood made frothy by the air, which mixes with it, and makes a Noise at its coming out of the Wound.

301. The Effect of such a Wound is often, 1. A pressing of the air got into the Chest upon the Lungs, from whence they become unfit both for Breathing or Circulating of the Blood. 2. An effusion and accumulation of Blood into the Thorax. 3. Its Putrifaction when extravasated, heated, stirr'd about, and shut up on all sides. 4. From hence a wasting, eating out, corruption and stench of the Pleura, Lungs, Midriff, Diaphragm and Pericardium. 5. Numberless Diseases thence arising. 6. Spitting of Blood.

302. The signs of Blood being shed hereinto are, 1. Straight-breathing. 2. The Patient's lying down being easier upon his Back, uneasy on the wounded Side, and impossible on the whole Side. 3. The Consequences describ'd in (301.) 4. A weight upon the Diaphragm. 5. A floating of the Matter. 6. The Nature and Seat of the Wound. 7. A great Weakness, with a pale Aspect and cold Sweats. 8. A continual encrease of almost all the Symptoms.

303. The

303. The same ought forthwith to be drawn out, 1. By putting the patient in such a Posture, obliging him to make such Motions, as together with some straining of the Body, will expel the Blood. 2. Sucking through a bending Pipe open at the Sides but obtuse at the End. 3. Injecting a diluting, resolving and cleansing Liquor. 4. Dilating the Wound. 5. Making another opening between the third and second Rib from below, at the distance of about four Fingers breadth from the Vertebres, and from the Lower corner of the Shoulder-blade, with a cutting Instrument in a parallel Line with the Ribs about the middle distance from them, holding the Edge downwards.

304. If these Wounds are not distended with Tents, are seldom open'd, the air kept from them, and that which was got in be expell'd by means of sucking and breathing out to the utmost at the same time, and that care be taken not to let any cold come near them, they are soon and very well cured, unless they be incurable.

305. And then may all those terrible Symptoms (301.) easily be prevented.

The Wounds of the Abdomen.

306. The Wounds of the Abdomen are known not to penetrate into the Cavity of it, 1. By Probing and inquiring into what posture the Patient was in when the Wound was given. 2. Injection. 3. Knowing the wounding Instrument and the Nature of the Wound.

307. If they have penetrated almost as deep as the Peritoneum, and the Teguments being thereby much weaken'd, they may be the Cause of Ruptures in robust People.

308. Therefore Care must be taken of these by proper Sutures and Bandages; and afterwards the common Cure to all Wounds will be sufficient.

309. But that they penetrate into the Cavity will appear, 1. From Probing and knowing the Posture. 2. Injection. 3. Knowing the Instrument and the Nature of the Wound. 4. Examining the Nature of things coming out of the Wound.

310. If then all the Symptoms are slight, there be no Fever, Pain nor Inflammation, no Blood comes out of the Wound when the Patient lyeth down upon it; The injected Liquor comes out again not altered, we conclude that none of the Entrails are hurt.

311. The Air must immediately be kept out, That which got in, must be forced out by Sucking and breathing out strong; the Integuments must be sowed together again by the operation of the Suture of the Belly; the Tents must be removed; and the Cure will be quite performed by anointing the Lips of the Wound with Balsams, lying upon the Wound, and very quiet; a soft, moist and spare Diet, and Dressing seldom.

312. If the Pain is acute, and there be Signs of a Fever and Inflammation; if Blood, watry Blood, Eatables, Drinkables, Chyle, Choler, Pus, Urine,

Urine, Ordures, Stench, do issue out of the Wound; If the wounding Instrument, the posture of the Patient in receiving the Wound and its Nature, Paleness, a cold Sweat, Restless, fainting Fits, and a deficient Pulse, are known and observed, the Surgeon knows certainly that the Bowels of the Lower Belly and which of 'em are wounded.

313. Then follow innumerable ills, partly,
1. From the Nature of the Bowels, consisting mostly of tender and many Vessels, not many Muscles, wherein the Humors and Liquids circulate with much difficulty, and not but when the Abdomen is close and whole. 2. From the interrupted function of the Bowel. 3. The quantity of spil'd Blood and its Corruption. 4. The action of the Air, entred at the Wound, which is much rarify'd and consequently presseth much upon all the contain'd Parts.

314. From whence they often prove Mortal. But if the Wounds of the Guts are large and at hand, they must be sowed; if small, they are to be left to heal of themselves, and the rest must be followed as in (311.)

315. If the Gut unwounded and unhurt gusheth out of a large Wound in the Belly, let the same be fomented with live Animals cut through the middle, or some other nervous Fomentation; then let it be put in again, and the rest perform'd as in (311.)

316. If the same coming through a small Wound, swell'd up with Wind, an Inflammation, or Excrements, cannot be reduced; let
it

it be done by the help of a Fomentation, pricking the same to let out the Wind, or by dilating the Wound.

317. If Part of the Pipe of the Gut is carried off by a Wound, an Imposthume, or Gangrene; the Surgeon must sow the upper Part at hand or skilfully brought thither to the hole which the Wound has made.

318. If the Caul has got out, and is yet moist, warm, and red with Scarlet Blood, it must be put in again, as in (316.)

319. If the same be dry, cold, livid; whatever is so, must be either cut off or tied off with a String; and the rest being cured by good Fomentations, must be reduced again in its place.

320. Large Bleeding, Glysters in the beginning if the thick Guts be unhurt, a good Diet, and gentle breathing, Rest and lying down, are the chief Remedies in these Cases.

Of Contusions.

321. When a blunt Body hath broke at once several Vessels by its motion, resistance or pressing, That hurt is called a *Contusion*.

322. Which raiseth the Idea of an Accumulation of small Wounds, with a rubbing or wearing away of the Solids and small Vessels.

323. The Effects therefore are, a tearing Solution of united Parts, a bruising Destruction of many, an Effusion of their Liquids into the neighbouring empty places whether naturally there, or occasioned by this very accident; and innumerable more ills which may proceed from these.

324. But

324. But the worst of these is, when the external Coats or Integuments being whole, the internal Parts are thus bruised, that the Liquids are stagnated, gathered, putrified; from whence an Ecchymosis, a spurious Aneurisma, a blewness in the Skin, an Ulcer, Gangrene, rottenness in the Bones, and in the Glands a schirrous Tumor and a Cancer.

325. It often hurts the Bones, and then follow all the Symptoms describ'd from (249, to 257.) and an offence of the Marrow, from whence Ulcers, Fistules, Caries, Putrifications; for the Marrow will be affected in the Bones, as we have seen the Brain to be in the Wounds or Bruises of the Scull, (273. and 274.)

326. And also sometimes the Muscles, from whence large Imposthumations, Gangrenes, Palsies and stiffness of the Parts.

327. It often spoils even the very Entrails, so as to occasion therein Inflammations, Suppurations, Gangrenes, schirrous Tumors and Hardnesses, and to deprave their Functions.

328. So that from (322, to 327.) duly considered, it is easie to explain so many wonderful and dreadful Diseases which usually follow Contusions; and may be foretold innumerable acute as well as chronical Diseases.

329. It is known to be present and what part it affects, 1. By Inspection and Feeling. 2. By the Effects of pain, numbness, heaviness, and the Colour being changed from the natural into a red, tawny, leaden, black, yellow, or green; by the loss of Blood or succeeding Gangrenes. 3. By comparing

comparing the wounding Instrument and its Figure with the Shape of the wounded Part.

330. And it is well known, 1. That an inward and large bruise of the noble Entrails is altogether incurable, and must needs occasion several Diseases and Death. 2. That a bruise of the Bones is very dangerous, very difficult to cure, chiefly about the Joints and the Marrow. 3. That the contusion of the Cranium is the worst of all, as has been seen, because of the nearness of the Brain. 4. Those of the larger Glands, near or behind the Ears, under the Armpits, in the Breasts, the Pancreas, Groins and Womb, to threaten Schirrous Tumors and Cancers, and all the Disorders that follow them.

331. In curing Contusions, Endeavours ought chiefly to be used to resolve them, to prevent Imposthumations, but above all a Gangrene.

332. A Resolution is obtain'd by removing all extravasated Humors without any farther breach into the Vessels.

333. And this is perform'd, 1. By rendring those extravasated Liquors fluid again. 2. By loosening the neighbouring Vessels. 3. By forcing those Fluids back again into the Vessels, by emptying them, or rubbing them.

334. So that letting Blood largely; giving instantly a strong Purge, but of the cooling Kind; applying to the Part a penetrating, loosening, and resolving Fomentation; hot rubbing upon the Part, internal resolving, sweating and diuretic Medicines are also of great use.

335. The

335. The Method whereof, the necessity of repeating and Doses are known from (334.) and the Danger of the Case.

336. A thin Diet of things that do not putrify easily, is also requisite.

337. But if the same will not admit of a Resolution because of its Largeness, and is accessible to the hand of the Surgeon; a Scarification, Opening and Imposthumation may obtain the Cure, doing at the same time all what was said in (334.) But if the Mischief is so great that the Part be already mortified, it must without delay be extirpated, if practicable according to the Rules to be laid down in (464, to 475.)

338. Yet more may be done by the Method laid down (from 331, to 335.) than is almost credible; Nature being always disposed to lend a helping Hand in separating and expelling its Foës.

Of Fractured Bones.

339. If the parts of a Bone are violently parted and divided into large Fragments, it's call'd *a Fracture*.

340. Which if alone, is call'd *a Simple* one; but if accompanied with a Wound, a Bruise, an Inflammation, an Ulcer, or several Fractures, the same is call'd *a Compound Fracture*.

341. It's also call'd a transverse, oblique, or oblong Fracture from its different place; And according to the Fragments resting upon each other, or lying next to one another, or raised with some
Splinter

Splinter sticking out, they differ in their Names, Nature, and Method of cure.

342. The Effects are different according to the different Nature of the fractur'd Bone, the variety of the Fracture it self, the variety of Fragments as to their Situation, Figure, Number, and Largeness; and lastly, the variety of the Place wherein, or of the adjacent Parts about which the Fracture has happen'd.

343. The chief Effects consequently are, The destruction of their Office, of upholding, bearing and directing the Muscles: The contraction of the Muscle, and throwing them out of their natural Place; The shortning, writhing, and deforming of the Limb; The tearing, bruising, and corrupting of the external Periosteum, of the small Vessels filling up the Cells, of the internal Periosteum, the Membrana Medullosa, and the Medulla it self: An overgrowing of the Vessels of the Bones, from whence the Callus grows unequally and with a Tumor deforming the Limb; A Distraction, Laceration, Irritation, Compression and even Convulsion of the Membranes, Tendons and Nerves; An alteration of the adjoining Vessels, their Destruction, Obstruction, Inflammation, Pain, Ecchymosis, Wasting, Suppuration, Gangrene, Death of that Part, and often of the whole; As for a Contusion, that seldom, it ever fails.

344. Which (342, 343.) being duly weigh'd, inform the Surgeon of the presence and the condition of a Compound Fracture; and the Diagnostic will still be plainer, if he feels the Fragments;

ments; hears their cracking against each other; seeth how the Limb or the Bone suffers in its Shape, and Motion; and understands at the same time what the Instrument was, with which, or against which the Bone was fractured, the manner and strength of the Blow, together with the concurring coldness of the Winter, which is said to make the Bones more brittle than they be naturally.

345. But an oblong Fracture is not easily, nor till after some time discovered; The pain, swelling, increasing, bigness of the Part, its unevenness, stinking matter breaking through the Muscles, all this compar'd with the strength of the Blood will give great Light.

346. That the Cure will be easie, difficult, slow, quick, entire or only partly perform'd may be foretold from the Figure, Simpleness, Composition, and Time of the Fracture; from the Number, Figure and Largeness of the Fragments; from the place of the wounded Bone, the nature of the adjacent wounded Parts, the Season of the Year; the Age and Constitution of the Patient.

347. The Cure requireth,

1. A restitution to the natural Situation, by Extending or Setting it again in its proper place.
2. To retain the same in that Situation by Bandages and Machines.
3. To Unite and Consolidate them by procuring a Callus.

348. If the fractured Bones have remain'd in their proper Situation, the first Requisite or Indication ceaseth. If

If they have gone aside but a little, a very small Extension will do.

But if they be so far pull'd out of their place, as to be entirely parallel to each others Sides, then there is occasion for a very large Extension; so that all intercepted Bodies may be removed, and that they may be restor'd to a requisite Length, and fit each other as before.

349. The Extension is perform'd, 1. by apprehending the Bone near the Fracture with the Hand or with Cords in the form of Snares. 2. By placing and keeping the Patient in a steady Posture. 3. Disposing the Part in the natural Situation. 4. A slow, straight pulling, such a Strength of the fractured Parts, and to such a Distance as the strength and the power of the contracted Muscles do require. 5. By the power and application of Mechanical Instruments, if the Hands want strength to perform this.

350. Which (348, 349.) (as they hardly ever can be done without Violence and Pain, when the Parts are already inflamed) ought often to be deferr'd till the Inflammation be allay'd. Otherwise the Patient will die Convulsive, or of a Gangrene.

351. If the Fragments are free and loose, they must be taken out, if it can be done easily. If the sticking out Splinters forbid their taking out, and they are bare to the Sight they must be cut out, if they are covered over, an Incision must be made to cut them out.

352. The Restitution is perform'd by turning the Part after a due extension (349.) and preparation

ration (351.) so cautiously, slowly, and softly, that at last one extremity of the Bone may meet t^other in its just place, the withdrawn Muscles be restored to their former Seat, and that nothing be intercepted between the Bones.

353. This is known from Anatomy, the comparing of the wounded Part with the like sound Part, the removal of Pain, and the return of the Part to its Length and natural Figure.

354. The Retention in this Seat is secur'd by Swaddlings, Bolsters, Splents, procuring rest to the Channels, and hindring or directing the action and motion of the Muscles.

355. Bandages laid on too tightly occasion Tumors, Suffocations, and Gangrenes; from whence innumerable Ills : So that they must be wound up so softly, that they may render the Part steady, and secure the Vessels in their proper places, but very gently.

356. If there be Wounds, they must be cured according to the Rules of Art laid down from (185. to 239.) laying the Bandage on at distances. The same ought to be understood of Inflammations, Pains, Tumors, and other Symptoms.

357. Then doth it grow together, and the Callus also, sooner or later, according to the Age, thickness of the Bone, the weight of whatever it is bound to bear, the difference of Season and Weather, between twenty and seventy Days.

Of Luxations.

358. A Luxation is the Removal of the Extremity or head of any moveable Bone out of the hollow, in which it was wont to move; and its losing thereby its moving power.

359. Which is either entire, or only in part, from whence the first is a *Disjointing*, and the last only a *Wrench*.

360. The worst is that which happens to *Epiphyses* being loosen'd from the Bones, to which they ought to stick closely. "Of which *Epiphyses* see an exact History in the Second Lecture of *Dionys* upon the Osteologie.

361. The Cause of these Luxations or Wrenchings may be *External*, from any power capable of Extending, Writhing, or Expelling.

362. Or may be *Internal*, from a foreign Matter grown and gathered in the Cavity of the Articulation, which thrusts out the Bone out of its natural place.

363. These Causes will be more powerful, if the Ligaments be extended, relaxed, or broken; whether this hapned from an Internal or an External Cause.

364. From hence will the figure of the Part undergo a Change, a Tumor, Cavity, Lengthening; the Limb will grow shorter, incapable of motion; the Muscles will be drawn aside, the subjacent Part will be numb, and paralytick, the adjacent Vessels compress'd; from all which must follow Pains, continual Waking, Inflammations, pituitous Swellings, Contractions, Convulsions, Wastings,

Wastings and Death of the Part, and even of the whole Animal.

365. From the knowledge and observation of which Phænomena, the Signs of a present Luxation are apparent.

366. And having weigh'd the bigness, figure, situation of the Part which is thus pressed and intercepted; the duration, concretion of the disjointed Parts, their Pain, Inflammation, Convulsion, and other Symptoms; what Parts whether smaller or thicker do surround them, what Ligaments are destroyed or only lengthned, what Muscles are annexed, and from such like the Surgeon may prognosticate, whether the Cure is like to be entire or defective; quick or slow; easie or difficult.

367. To which is required, 1. The Resetling or reducing of the disjointed Parts. 2. And their Retention in their natural Seat till the Cure is perfected.

368. The Reduction is obtain'd, 1. By placing and keeping the Patient in a steady posture. 2. Moving the Part so as to make it answer its Cavity exactly. 3. Placing it therein by turning, thrusting, or even beating it in.

369. The Retention is secured by keeping the Parts steady with Bandages, and ordering the Patient to lie very quiet, with the Parts in their most natural Position.

Of Inflammations.

370. Inflammations and Phlegmons having the same Causes and the like Effects, take their Name from

from *Fire*: and likewise, *St. Anthony's Fire*, &c.

371. And it is an attrition of the red arterial Blood, stagnating in the smallest Vessels occasion'd by the Motion of the Blood circulating with the greater force in the larger Vessels.

372. Which therefore may take place either in the Extremities of the smallest Arteries, or in the arterial lymphatic Vessels, being incapable of transmitting the red Globules receiv'd by their dilated Orifices through their Extremities.

373. So that its Seat is in every part of the Body where there is a tissue, that is, abundance of Arteries dispersed in the manner of a Net, and wherever the lymphatic Arteries have their beginning.

374. So that all Arteries, Veins, Nerves, Membranes, Muscles, Glands, Bones, Cartilages, Tendons, Bowels, and most all the Body are subject to the same; But no part so frequently as the fat Parts, " wherein also they are more difficultly
" cured, because of the extream smallness of its
" Vessels, &c.

375. This Stagnation (371.) is occasion'd in the smallest Arteries, 1. By whatever makes the Ends of the Vessels in their Cones and Cylinders so narrow, that the Diameter of their Orifice be made less than the Diameter of the Globule of the Blood, whether it be by pressing upon the outside of the Vessels, or distracting, turning, breaking, bruising, burning, gnawing, or curling the same. Whereof the Causes may be Heat, a violent Motion, foreign Bodies stuck in, Ligatures, Weights, the taking or application of sharp Bodies,

Bodies, sharp Cold, too great Rubbing ; all the Causes of Wounds, Bruises, Corrosions, Fractures, Luxations, and Obstructions.

376. The same is, 2dly, produced by every thing that shuts up the Passages, and at the same time applieth to them either inwardly or outwardly such acrimonious Bodies as are both oily and saline.

377. Thirdly, By all such things as occasion the Blood to settle and coagulate in the Body ; as too violent Motions, a draining of the thinest Parts by Sweating, Urine, Spitting, Looseness, ferous Eruptions, and all such as curdle ; whether Medicines or Poisons.

378. In the Lymphatic arterial Vessels the same is occasioned, 1. By all the Causes which stretch their wide Mouths so as to give entrance to the course parts of the Blood, which being drove in deeper, meet with narrow Passages which give way ; where then happen all what is said in (377.) The same will follow from the too easie giving way of the Vessel at its beginning, and the too strong Motion of the arterious Liquid. 2. By all the Causes of Inflammations in the Blood-Vessels (375, 376.)

379. So that the same Disease may take place in every conic Vessel, wherein the Liquor doth flow, from the wide to the narrow End ; for as the red part is in the Blood, so probably there is in the Lympha some part thicker than the rest.

380. From whence may truly be discern'd wherein differ Phlegmons, St. Anthony's Fire,

watry and schirrous Tumors from Inflammations.

381. But as often as these Causes from (375, to 379.) have occasion'd that Stagnation described in (371, 372. 379.) and in the Vessels mentioned in (372, to 374. 378. 379.) then doth the power of the Blood, push'd on by the remaining vital Strength, occasion some Effects; which are at the same time Signs of a present Inflammation.

382. 1. The small Arteries, hardly visible, being obstructed are now enlarged by the distending Blood; whence a red Tumor. 2. The Lymphatic arterial Vessels, pellucid before and invisible, undergo the same Fate; whence an encrease of the Tumor. 3. The distended small Vessels are near breaking in the smallest Fibres; whence a pricking pungent Pain. 4. The Liquids and Solids are much pressed upon each other; whence a hardness, and a thrusting effort of the Part. 5. A shining Redness ensues from the too great accumulation and too forcible impulse of the Blood. 6. From the resistance, beating, and pressure ariseth a strong rubbing of the several parts of the Liquids amongst themselves, against the Solids, and of the Solids against them; whence Heat and *Æstuation*. 7. And because the Shock of the Blood push'd forth from the Heart and received into the Extremities of the Vessels doth dilate their Sides, there follows a Throbbing. 8. From the Fibres being irritated, and the Blood being push'd quicker through the Vessels that are not obstructed, as it returns
freely

freely enough through the Veins (they still growing wider and wider) but in its Passage through the Arteries is often interrupted, *The Pulse beats quicker* ; Whence a Fever, Drought, Heat, Watchings, Weakness and Uneasiness.

383. This is the History of Inflammations in its Beginnings or Infancy.

384. If then Blood be let out of a Vein with a full Stream, out of a large Orifice into a Basin or Porringer, as soon as it cools it forms on its Surface a white, tough, thick, stiff Skin, not unlike a Hog's Skin.

385. If the Disease increaseth, you'll see the same Symptoms as from (382. to 384.) but of a worse Nature ; the Lympha being squeez'd out is separated, and the red part of the Blood grows still closer and thicker.

386. If the flowing Humor be soft, its Motion be sedate, the Obstruction be small, and its Seat chiefly in the Arteries or the beginning of the Lymphatics, the Canals be yet moveable, a diluting Vehicle be given with such Medicines as are able to reduce the coagulated Humors to their fluidity, and make them move that were stagnated. In this Case the Inflammation may be cured by *Resolving*.

387. If the flowing Humor be soft, but the Motion quick, the Obstruction great, nor capable of being resolved, the Symptoms increased, the distended Vessels being broken with Pain, Heat, beating and swelling, let out their Liquids, break and in a small degree corrupt the same ; These will wear away and dissolve the tender Solids,

lids, mix their Substance with the Fluids into one homogeneous white, thickish, glewish, and fat Humor, call'd *Pus* : And this is what is call'd a *Suppuration*, or an *Imposthumation*, and is another Method, by which an Inflammation may be cured and terminated.

388. If the Humor be sharp, in a great Motion, the Obstruction great, the Vessels stiff, all the Symptoms of (382. 386, 387.) be violent, then do the small Vessels break suddenly, the Liquids putrify ; the watry Blood creeping under the Skin, gathers into small Bladders looking reddish, like the Washings of raw Flesh, or like yellow Matter ; which by degrees turns into an ash, pale, tawny and black Colour ; the redness of the Part, the Pain, Heat and Pulsation, and Swelling leaving the same, remove to the adjacent, and the Part affected dieth : This is called a *Gangrene* ; and is a third End into which terminate Inflammations.

389. If to a Part thus affected is added an external pressure, or a very great Heat doth dissipate the Liquids, the dead part hardens like dried Leather, suffocates all that lieth under it, and corrupts the same.

390. The Application of Things actually or potentially cold, of Adstringents, coagulating, repelling, fat and sharp Medicines that shut up the Pores, and stupify the Parts ; Strong Ligatures, and outward pressure, quickly occasion this change of an Inflammation into a *Gangrene*.

391. And soon pass into a Mortification.

392. If the inflamed Part be Glandular, the internal or external heat be great, the impacted Matter be sluggish and thick, the Emunctories of the Glands be obstructed, the Folliculi and the Sides of them be distended, there grows a hard Tumor in the Gland free from pain; its called *Schirrus*; which is a fourth End of an Inflammation.

393. The Cause, the affected Part, the Greatness, Depth Quickness and Symptoms of the Inflammation and the Constitution of the Patient, compared with the Signs and Effects thereof do make the Prognostick easie.

394. It is also evident, that a different Method of Cure is necessary according to the different State and Conditions of this Disease.

395. For if any of the Causes (from 375 to 379) has in any part (372. 373. 374. 379.) produced an Inflammation as in (371) with the Symptoms of (382. to 384.) and the Circumstances be as in (386.) The following Indications are necessary.

1. To hinder any farther harm to the Vessels.
2. To remove that which they have already received.
3. To procure fluidity and softness to the obstructing matter, and preserve them in that State.
4. Or if that cannot be obtained, to drive the same back into the larger Vessels.

396. A farther Harm is prevented.

1. By removing and correcting the known Causes mentioned (from 375 to 379)

2. By

2. By lessening the power and influx of the arterious Liquor by bleeding and purging.
3. By lessening with the same Remedies the quantity of the Liquids.
4. By making a Revulsion of the Blood, causing the same to flow more strongly towards other parts, by Suction, Friction, Plaisters and Blisters, Fomentations, Bathings, Issues, Setons, and strong Purges.
5. By making the Air of the Room coolish and dry ; quieting wholly or in part the Passions ; natural or artificial Rest, a thin, liquid, and cooling Diet, both in eating and drinking ; and by Medicines no less cooling than diluting.
6. By appeasing the Motion in the very part, with the application of cooling, repelling and adstringent Medicines outwardly, mixing with them some Anodynes, or some opening Remedies differently prepared and mixed as occasion and Circumstances do require

397. The Hurt received may be removed by the same means : for having loosen'd the too great pulling of the Fibre, its own power will restore it to its former shape, and nourishment returning therein render its former strength.

398. The obstructing Matter may be made fluxile again, if the same be attenuated and diluted.

1. By restoring to the Vessels their elastick power of moving to and fro, which is obtain'd by lessening the quantity of the distending

stending Liquid, letting blood, repeated strong Purges; or by stimulating the Fibres with some thin aromattick Liquor drank hot; with Fomentations, Frictions, dry Cuppings, or Scarifications.

2. By drinking some new thin, watry hot Liquor, and thereby diluting the stagnating Bodies.
3. By using such attenuating and resolving Medicines as are at the same time of a nature opposite to that of the obstructing Body, and this either outwardly or inwardly in the form of Decoctions, Bathings, Fomentations, Steams, Poultices, Plaisters, or Ointments.

399. The same Matter may be softened by drinking thin watry Liquors and eating nothing that has any sharpness or acrimony of any kind, by soft diluting Medicines as are able to blunt the Spikes of that Matter, or which are endowed with a particular sharpness justly fitted to destroy the sharpness of the peccant Matter, which is commonly called a *Specifick*.

400. The Matter is drove back again.

1. By letting blood copiously out of one or more Arteries or Veins at a time.
2. By loosening the Fibres.
3. By artificial Frictions with Brushes or Cloths, &c.

401. Hence is understood what is meant by a *Resolution* in all inflammatory Diseases whether internal or external, and which the Physician ought always to endeavour at; for that may be called

called a perfect Cure when obtain'd without a Crisis, as in (386.).

Of Impostumations.

402. If those things from (395. to 400.) have been done without success, or have been neglected, or done too late, then doth an Inflammation proceed to an Impostumation (387.) and is known by the Signs there set down. The Indications then are.

1. To change the crude Matters forthwith, and to ripen them into one homogeneous Liquor.
2. To soften both them and the adjacent parts.
3. To draw them outwardly.
4. To procure an opening to the ripened Pus for its discharge.
5. To cleanse the place.
6. To heal the rest as all common Wounds.

403. The Ripening is hasten'd by the application of such as,

1. Increase the Motion in the Part by fomenting, stimulating, and heating with such as do actually or by their innate virtue, afford warmth, and do this throughout the Body; so that there follows a little Fever as an unavoidable consequence thereof.
2. Such as bound that rais'd Motion and Heat within the Part it self, hindring the too great exhalation and dissipation by glutinous Plasters that shut up the Pores, and by the softening of the too great Acrimony.
3. By such as moderate the Motion and the Nature of all the vital Fluids, so that the

the same be neither too Sluggish, nor too Lively.

4. By leaving the Part close till all the Parts inflamed, which are incapable of being Resolved be turned into Pus. And this is the Method to procure laudable Matter.

404. And unless the inflamed Matter be thus changed, the Imposthume cannot be open'd Safely or to any Advantage.

405. The softness of the Part, the floating of the Tumor upon pressing, the Whiteness, the lessening of Pain, heat, redness, tension, throbbing, fever; the top of the Tumor pointing, the part being sensible of Heaviness, all these do plainly shew that the Pus is perfected, and fit to be let out.

406. If the same be after this left any considerable time shut up in the Part, it grows thinner, sharp; it putrifies, encreaseth, consumeth and eats into the neighbouring Parts, and by its bulk, weight and motion creates Sinusses and Fistules, which differ in their Nature according to the different places wherein they happen, and are worst of all when in the lower Gut, call'd *Rectum*.

Or the same, after the dissipating of the thinnest Part, grows hard and occasions hard Tumors chiefly about or in the Glands.

Or lastly, It is taken back into the Lymphatic Veins or the Blood-Veins, through their corroded Orifices, and so is mixed with the Blood, spoils the same, and being collected in the Bowels it corrupts the same by making therein Gatherings of the worst Kind, disturbs their Functions, and con-

consequently produceth innumerable and most terrible Diseases.

407. By the same Means as in (403.) the Integuments of the Imposthume may be softned above and below, attenuated and loosened as well as the adjacent Parts.

408. And even by these Means the Pus may be thrust or drawn Outwards, having first less'n'd the resistance of the said Integuments by the suppurating Method in (403.)

409. Then ought to be applied things of a moderate Acrimony, with Emollients mixed together with fattish Ingredients, that so the senseless Integuments may be open'd easier and without Pain.

410. Then having pressed the Pus duly towards the pointing Tumor, let the Launcet be stuck into the whitest, softest, the most pointing, the most depending Part, until the Pus coming forth tells the Surgeon that he has launc'd deep enough; Then let the same be raised again, making a Large but even opening in its way, or driving its point at once into the opposite prominence of the Tumor cut all the Integuments between these two Openings, skilfully avoiding all Fibres or Vessels that are whole, then let the Pus be squeezed out gently and by degrees, avoiding to admit much Air or Tents into the Openings.

411. Then let it be cured with Cleansers, suppurating, Digestives, balsamick, detergent, and drying Medicines, altering and ordering them according to Circumstances, and the Doctrine of Wounds in general (from 192. to 220.)

412. If the Patient be possessed with a trifling fear of the Launcet, let a Caustic be applied to the Part, as in (410.) the Eschar softned with Butter separated, and the Cure be finished again, as in (410, 411.)

Of Fistules.

413. From hence are easily understood the Origine, Cause, Nature, Place, and Effects of Sinusses, and Fistules. (406.)

414. Such as are open are easily discern'd; Those that are inclosed easily discovered and traced by feeling the soft and yielding Cavity.

415. They are cured by cutting asunder the lowermost part, filling up the Cavity with melted Digestives according to the present Circumstances, injection of Deterfives, and with Ligatures pressing gradually from the Head to the opening of 'em: But much quicker by cutting the Integuments with either the Incision-knife, or with Scissars guided by the hollow Probe, &c.
 " Which Operations see at large described in the
 " Fourth Demonstration of *Dyonis* his Chirurgical Operations.

416. From the preceding Doctrine of Inflammations and Impostumations thus far, a skilful Physician or Surgeon may learn how to know to prognosticate and even to cure Bubo's, Swellings behind the Ears, Furuncules, Plague Sores, Carbuncles, Boils, St. Anthony's Fires, Measles, Small-Pox, and red Spots in Fevers.

417. Nor can it be difficult henceforth to know the event of Inward Imposthumations, to which
 the

the helping hand of the Artift cannot attain; for many and great are the ill's (406. 413.) proceeding from the accumulation of Matter in the feveral Cavities of the Body.

418. For if the Necessity of the Part be such that the Animal can either not live, or not be in health without its Integrity, the future Events are easily foreseen, and how difficult the Cure must prove.

Of Gangrenes.

419. If upon an Inflammation (371, 372.) there follows a Gangrene, (388.) another Method is necessary for the Cure thereof. For by the Name of *Gangrene* goeth, that state of a soft Part, which tends to Death; But a *Sphacele* is that state which has already destroy'd all Life in the affected Part, when the adjacent are yet Living.

420. So that a Gangrene mostly rages in, and seldom reacheth farther than to the fleshy Membrane under the Fat of the General Integuments all over the Body, whereas a *Sphacele* penetrates every thing to the very Bones; this is generally a Consequence of the former, unless it took its rise from a Corruption of the Bone of the Medulla, or the Periosteum.

421. So that the Causes of a Gangrene and a *Sphacele* are the same, differing only in Violence, Duration and Place.

422. So that, 1^o. all the causes of Inflammations, (375, to 379.) (if the Liquids do stagnate entirely, and the circulating Blood doth with violence

violence run against the Part) do hereto belong.

α . A strong Ligature of the Veins. β . A Compression of the same from any Cause, such as Tumors, &c. γ . A great Cold. δ . The perspiration obstructed in a Phlegmon by Adstringents; fat, cold, repelling, and stupifying Applications; chiefly, if the internal Juices be sharp, or if any acrimonious Ingredients be mix'd up with the external Means. ζ . Wounds, Bruises, Luxations, Fractures, chiefly if the Bandages be laid on too tight. η . Sharp oleous Medicines applied to sound or sick Parts. θ . The Lying of the Patient upon inflamed Parts. ι . Ruptures not timely reduced and strangled, either with their proper Contents or from without in the narrow Processus.

423. 20. All things as give an edge to the Liquids, and thereby enable them to cut through and destroy the Vessels; Such are α . A long continued Stagnation of an enclosed and warm Humor, whence the Acrimony of (80.) a Corrosion, whence the Blood gathers into an Aneurisme, the Pus into an Imposthume, a gathering of Water in the Cranium, Chest, Abdomen, Scrotum, &c. Bruises and Wastings of Liquors own the same Cause. β . An ill-natured, diseased and sharp Disposition peccant through the whole, and falling upon the affected Part, as a Lymphatic Juice flowing for a long while about tendinous Parts, the watry and malignant Blood of Cancers, the Bloody-Flux, the putrified Waters in Dropsies; the flowing of febrile, pestilential, variolous or scorbutic Matter towards fleshy Parts, and chiefly the Gums.

424. 3°. Such as occasion the Death of the Extream Parts by the defect of the vital Juice; as the long continued posture of sitting or lying down in old People, or an extream Weakness.

425. 4°. Poysons, the Nature of which is more the Object of our Admiration, than of Mechanical Knowledge.

426. The Signs of an approaching Gangrene are plain from the Knowledge of its Causes (from 422. to 425.)

427. But the Signs of its being already present are, 1. The Phenomena of Inflammation, suddenly absent without having first removed or corrected its Causes. (Compare 383. 385. with 422. to 425.) 2. The dulness of the Feeling. 3. The Colour being changed from red into a paler first, then into an ash, tawny, livid, and lastly, a black Colour. 4. The softness and withering of the Skin, and the Impressions made with the Fingers ends not rising again. 5. Pustules fill'd with a lymphatic Ichor, somewhat yellow or reddish all over the inflamed Part. 6. When from a great Coldness there has ensued a great itching and pricking together with an intense Redness, which is soon succeeded by a mortifying Blackness.

428. That a Sphacele is at hand may be known from these Signs of a Gangrene when still encreasing.

429. The Signs of its presence are, 1. A preceeding Gangrene of the worst kind. 2. The entire loss of feeling and motion in the part, so that the

the same being cut, prick'd, and burn'd feel nothing, but be only sensible of a weightiness. 3. A livid, tawny, black colour. 4. A softness, withering and coldness of the Skin and its being loose, and at last dry and hard. 5. A cadaverous Stench. 6. A Corruption communicating its killing poyson and eating every adjacent part very deep even to the Bones.

430. The great and hasty danger of this Disease requireth a true and exact Prognostication.

431. Which will be such, 1. If the Patients Age, Constitution and Strength, and the Violence of the Disease be rightly considered. 2. And the Quickness of the same. 3. If the Internal and External Causes be known. 4. The Season of the Year. 5. The Part affected, so far as it is more or less necessary to Life, or according as it is of a moist, sinuous or dry Composition.

432. Hence the following plain Rules.

An ill-natur'd insuperable Gangrene terminates in a Sphacele.

From a Sphacele ensueth the death of the part and a sudden infection of the neighbouring parts.

A Gangrene requireth a speedy help.

A sphacelated Part must be suddenly extirpated.

A Gangrene of the Brain, of the Bowels and Bladder is mortal : and if the same doth happen in acute Diseases it occasions Death in a short time, though the noble and greater parts seem hardly injured.

A Gangrene of the inside of the Mouth, Lips, Nostrils, and of the Genitals, is hardly curable.

A Sphacele of the Extremities, and of tendinous Parts is mortal in aged People.

A Gangrene to Consumptive, Dropfical and Scorbutick People is of a very dangerous consequence, and most times a Fore-runner of Death.

A Sphacele mounting upwards occasions Wakefulness, Deliriums, Swoonings, Belchings, Hiccoughs, Convulsions, Pains, cold Sweats with a Drowfiness, all which forebode Death.

A Lividness, Blackness, a Dryness round the Ulcers, signify that a Gangrene, a Mortification and Death it self is at the door.

433. The Indications to cure a Gangrene are,
1. To preserve the vital Strength. 2. To hinder the corrupted Matter from returning into the Veins, &c. 3. To put a stop to the Putrifaction present, and to confine it as much as possible.

434. The vital Strength is preserved and confirmed by giving. 1. All that is capable of overcoming the inward Causes, (from 422. to 425.) do raise the Spirits, preserve the circulation of the Liquids entire; having at the same time a regard to Age, Sex, Constitution and Season. These therefore may be taken out of the Cooling as well as Warming Medicines as occasion seems to require. 2. A quick restorative Diet. 3. Outward Applications to the Veins or Nostrils of Bread or Poultusses soak'd in such Medicines as are indicated in the first number of this very Aphorism.

435. The putrified Matter is hindred from returning into the Veins. 1. By confirming vital Strength, that is encreasing the Motion of the Liquids towards the Surface of the Body. 2. By procuring

procuring a Vent to the same on the outside of the Body, which may be done with Fomentations, Cataplasms made of diaphoretic, emollient, and loosening Ingredients; by Scarifications, Cuppings, Leeches, or even actual Fire being held very near the Part.

436. A beginning Putrification is corrected.

1. By removing its apparent Causes (422. to 425).

437. 2. By correcting its nearest and immediate Cause, *viz.* the stagnation and heat. α . By pickling as it were the stagnating Liquids against that putrification. β . Fencing the Solids against the same. γ . Procuring motion to the corrected stagnating Fluids through these fenced Vessels.

438. The Liquids are preserved by the use of Salt, Vinegar, Wine and Aromatics.

439. The same will be a Defence to the untainted Solids.

440. Motion may be procured to the stagnating Liquids. α . By great Draughts of warm watry Liquors, or the same outwardly applied. β . stimulating the Arteries with such as are of a contrary nature to the Disease. γ . Moving the Juices with Heat, Frictions and Cordials. δ . Lessening the Quantity which kept the Vessels too much distended.

441. These (from 434. to 440.) being soon done, often repeated, will very often cure a beginning Gangrene by a successful Correction, or a gentle Diaphoresis.

442. But if the Liquids are already putrified, and their most moveable Parts are exhaled, and

the Channels are destroy'd, the Disease will not be conquer'd by these Remedies ; nor will the offended Part be restored to its perfect state again, but the adjacent will even be much consumed by the motion of such living Particles as are not capable of exhalation.

443. So that in this Case the sole intention ought to be to separate forthwith the dead part from the living.

444. This separation is obtained always by the strength of the vital Liquid running to the extremities of the gangren'd Eschar which is there suffocated, and there forced to suppurate, by which Mechanism those Fibres are loosened which connected the gangrened and sound Parts together.

445. So that it appears that the art consists 1° in doing those things which are laid down (from 433. to 440.) 2° In hastning the Suppuration. 3°. In softning the Eschar.

446. To hasten the Suppuration, the corrupted Part ought to be scarified as far as the living sound Part : for having hereby lessened the too great Suffocation, there succeeds an Impostume in the room of a creeping Gangrene, whereby the gangren'd Skin and Fat are generally separated from the subjacent yet living parts.

447. And that the Blood may the more circulate through and towards those Extremities of the Vessels, Leeches, Cupping-glasses, and the like drawing Helps are very often useful.

448. The scarified Parts must be fomented with hot Liquors, such as avert and resist putrification, and soften the hardness of the Eschar.

449. Parts as hang loose, dead, separated, and the fofned Eschars ought to be taken away with Pincers or Scissars.

450. On the whole affected Part ought continually to be applied hot Cataplasms whereof the heat be always kept up to encrease their virtue ; which must be made of emollient Diaphoretics and Anodynes.

451. It will also be of use to uncover or take off the Dressings seldomer than is usual.

452. After these (from 446. to 451.) have been done, the Eschar begins to be contracted, the scarified parts to be moistned, the Edges of the sound parts to swell, to grow red, to suppurate, and the dead part to be loose ; it is a sign that the separation of the dead part from the living is near done, that the creeping Ill stops its current, and that the part will soon be cleansed.

453. Then ought to be applied soft, anodyne, Balsamics and Digestives ; the Ulcer is but seldom to be uncover'd ; all things avoided, which occasion a stiffness in the Fibres ; the Part must be kept quiet and easie, and the Cure must be finished according to the Rules relating to Ulcers in (411.)

454. If the Gangrene has been occasion'd by a hard Frost and Cold (427. N. 6.) the Part must be covered over with Snow or with Linnen made wet in ice-cold Water, until the Points of the Frost being drawn into the Snow or Water, the same begin to be loosen'd by the return of the vital strength.

455. If another Method be taken, by applying heat to the Part immediately, the same will suddenly putrify, for the Points will thereby be put into a violent Motion, but not be drawn out of the Part.

456. Which (454.) being duly done, the Patient must be strengthened and reviv'd by warm Cordials, and even put into a Sweat.

Of Mortifications.

457. If a Gangrene is already converted into a Sphacele, whatever is infected must be taken off.

458. Which is done different ways according as the Part is wholly, or only in part mortified; or according to the Seat and Nature of the Part affected, which sometimes cannot be wholly extirpated; such as the Buttocks, &c.

459. If therefore a part is not corrupted to the bottom, or cannot be extirpated; The Surgeon must endeavour, 1. To stop its Progress. 2. To take off what is corrupted already.

460. Its progress is stopp'd, if the Communication between the dead and living Part is cut off.

461. This is done, if in the neighbourhood of the corrupted and the sound part (but always taking in part of the sound) a Boundary is marked out with Cutting, Burning, or Caustics, and that every where deep enough.

462. The corrupted parts are separated, if after having first stopp'd their progress, or at the same time of doing it, the whole part be burnt and

and cut down to the sound bottom, and is afterwards consumed by a hot Application of a very sharp Lixivium, till it be entirely got away by Eschars, which are continually to be softened and removed till you are come to the quick. Avoiding very carefully the Parts that are quick and sound.

463. And when afterwards the Signs are present not only of the Parts being alive, but sound also; then ought what remains to be treated like an Ulcer or a Wound.

464. But if an extream Part sphacelated to the very Bone can be taken off without endangering Life, the same ought to be extirpated together with the Bone; which being once divested of its Flesh and Vessels, can neither be nourish'd nor kept alive.

465. This Extirpation (when in the Fingers, Wrist or Instep) is performed with a Hammer and Chissel.

466. But in greater Limbs and Bones, such as the Thighs, Legs, Shoulder, or Arm, there is occasion for more troublesome Labour, which will be known from what follows.

467. The place, where the Extirpation is to be performed, is chosen by these Rules;

1. The sound Part must be preserved as much as possible and convenient.
2. The corrupted Part must altogether and at once be taken off with the greatest exactness.
3. The most commodious Use must be procured to the remaining part of the Limb.

468. So that in all the Limbs, except the Legs, the Amputation ought to be made in that sound Part.

Part, which is nearest to the diseased, (from the Reasons given in N^o. 1, 2. of 467.) But in the Legs the Amputation ought always to be made a little below the Knee, although nothing but the Foot shou'd be sphacelated. (See N^o. 3. in 467.)

469. For to perform the Amputation, and to know the future Consequences thereof, it is requisite to have regard,

1. To the Preparation.
2. The Performance it self.
3. The Cure of the intervening Symptoms.
4. The Consolidation.
5. The Supplying of the lost Limb.

The Preparation is accomplish'd,

1. By a Compression of the large blood Arteries, by means of pyramidal Bolsters, and by twisting the Ligature to be placed over them on the Sound part near the Diseased.
2. By drawing the Muscles of the Part strongly and equally by means of a Leather Bandage, made with Loops and Strings to pull by.
3. By keeping the whole body of the Patient, and the part to be amputated very steady.
4. Bending gently the part, that the Muscles may hang loose, and may not be cut beyond the place of Extirpation.
5. Giving a cordial sleeping Draught to the Patient sometime before the Operation.

470. The Operation is perform'd after this foregoing Preparation.

1. With a sharp, strong, crooked Knife, obtuse on the Back, well temper'd, which is thrust under

der the Leg, and remounting by the Inside till it comes to the place where the Operator began, which makes a circular Incision, cutting all the Flesh to the very Bones, not forgetting the Periosteum; which is soon done if the Operator cuts with all his strength, and equally.

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2. If there be two Bones in the Part, instead of the Knife, the Surgeon takes the Penknife to cut the Flesh betwixt the Bones exactly, and even repasseth the said Penknife around the Tibia to cut the Periosteum, if not already well separated.
 3. The separated parts ought to be drawn from each other by some Servants, or by means of some Linnen put between the Lips of the Wounds, to make the more room for the Saw, that the same may not touch the Flesh.
 4. Then is the Bone divided with a sharp, fine, strong, and strait Saw; which is to be moved first gently, till the Saw be fixed in, but then strongly and equally, and always perpendicularly; beginning to saw the smaller Bone first, and afterwards the biggest (when there are two) for fear that otherways the weakest shou'd fly out into Splinters by the falling of the Saw upon it.
 5. During all the time of Sawing, some Servants ought to bend the Bones to make more way for the Saw.
471. The chief Symptom which follows after this Operation is the Loss of Blood, which requireth immediate Help.

1. The

1. *The Vessels*, whose situation is discovered by the streaming of the Blood upon the flacking of the Ligature, must be taken hold of with Pin-cers that have a Spring, or are held by a Servant, and being pull'd out towards the Kneepan, are secured by running a Thread through them, and tying them close with it, *if large*: Or else we shut the Vessels up by means of a Thread run in at both Sides of 'em, and threaded in two crooked Needles.
2. The Hemorrhagie may also be stopp'd by applying red hot Irons to the Vessels, which makes 'em shrink, &c.
3. Or with Bolsters impregnated with Vitriol to the Parts; as also other adstringent and absorbing Medicines outwardly applied.
4. The Muscles and Parts which were drawn back and kept asunder (469, N^o. 2.) are loosen'd and pull'd over the Bone as far as they can go, to cover the same.
5. The Stump well lay'd over with two Stopples, and charg'd with Adstringents is forced into a Bladder slit on purpose for that end, and also furnish'd with adstringent Pouders.
6. Then is a very firm Ligature lay'd all over this.
7. The Patient ought to be kept quiet, well Dieted, and have Sleep procured him by proper Means.

472. The Bone is heal'd, if speedy care be taken of the Exfoliation, and a Putrifaction or a Caries is prevented, which is effected, if there be immediately applied small Bolsters duly soak'd in tincture of Mastich.

473. The

473. The Flesh is heal'd by the same Means as other Wounds, about which consult (from 189. to 210.)

474. If the Patient, who thus loses a great Limb, happens to have strong Bowels, and consequently to make a great deal of Chyle and Blood; There often will ensue the Effects of a Plethora describ'd in (106.) Which to remove, the Patient ought to be bled some times, as occasion requires, and to be kept to a moderate Diet.

475. The damage sustain'd by the loss of the Limb, is made up in part by fixing or adding to the Body an Instrument made in imitation of the lost Limb. About which consult, *Aquapendente. Hildanus, van Solingen. and Ambr. Paré.*

Of Burnings.

476. When a Fire-coal, or any thing containing a great heat is applied to our Body, there ensueth a Destruction of small Vessels, and an extravasation of Humors, which vary according to the difference of the Cause, of the time during which it is applied, and of the several Parts thus affected.

477. The different Degrees of these various Effects are like to those which have been observed in Inflammations, beginning from the slightest to its greatest and worst Effect, a Mortification. (See from 370. to 464.)

478. So that the Phenomena, Diagnostics and Prognostics are the same.

479. Nor doth the Cure differ in any thing material.

480. A Burning or Scalding, which is still within the pale of an Inflammation which admits of *Resolving*, (386.) is to be cured by such Means, as pickle or preserve the Liquids, puts them into motion ; as free the Vessels and keep them entire : Which is obtained by applying to the Part a moderate Fire, warm Fomentations and Cataplasms. (395, to 402.)

481. A Burning which tends to a Gangrene, known from the Skin being already shrivell'd and corroded with Vesicles ; requireth the same Cure as an Inflammation in that degree, with Fomentations, Cataplasms, Emollients and Digestives. (402, to 454.)

482. A Burning which has already proceeded to a compleat Gangrene, or to a Sphacele, is known and cured like the Diseases from (419. to 476.)

483. No where is more occasion for procuring a smooth and even Cicatrice than in these Cases. (217.)

Of a Schirrous Tumor.

484. A Schirrus (392.) may be occasioned by any thing which is able to coagulate, thicken and dry the Juices in the Glands : Its Seat therefore is any Kernel, but chiefly such as contain a Liquor which thickens easiest, or because of its Situation occasions the same to stagnate most. So that this Distemper is most common in the Eyes, Nostrils, Mouth, Breasts, Armpits, Groins, the Pancreas, Mesenterium and the Uterus.

485. So that the same may be produced by an Inflammation in those Parts ; by Milk stagnating, contain-

containing too great a proportion of caseous Matter, hardened, and coagulated: by Contusions (322.); by violent Motions and Attritions of those Liquids; by Plague Sores, Bubo's; Ulcers closed too soon; by the Blood being over-charged with black Choler carried thither, or black Choler it self, and chiefly when at the same time the Menstrua or hæmorrhoidal Fluxes are suppress'd; by Matters growing stony, thick, rough, and like Plaster; by a sorrowful life; hard living; or this vicious habit being deriv'd from Parents.

486. The Effects of a Schirrus, when made, are, to occupy the adjacent Parts by their increased bulk, to squeeze, and even to lay a great force upon 'em; to hurt and damage the Function both of the schirrous Part, and of the adjacent; whence Inflammations, Imposthumes, Gangrenes, Palsies, Wastings, Sphaceles, Barrenness, difficult Labours, Iliac Passions, and the like Ills are produced, whereof the immediate Cause is easily known from the Nature, Offices, and Seat of the damaged and of the compressing Parts.

487. Their Presence is known from their Causes (484, 485.) Effects, (486.) Phænomenas. (392.) the affected part (484.) compared with the Constitution of the patient.

488. From the same the Event of 'em is foretold, and chiefly considering the time of their Duration and their Effects. Of it self a Schirrus is harmless enough, but becomes Malignant, if by any means you put its Cause and Body in Motion.

489. Which

489. Which Motion being scarce avoidable, occasions continual Uneasiness and Fear.

490. So that he that attempts the Cure of 'em, ought to observe :

1. That if a Schirrus be recent, good natur'd, seated in a convenient place, not yet quite hardened, the Patient be of a very good constitution and sound Juices ; That in those Cases he may attempt to *Resolve* it by gentle and emollient Means ; whereto belong the Steams of Acids directed to the Part by means of a Funnel, “ but chiefly the use of Mercury given “ inwardly in small but often repeated Doses, “ and outwardly mixed with cooling and emollient Medicines.
2. If it doth not give way to those Means, and that the Place, Situation, the Adjacent parts, Moveableness, the degree of Ill, the Strength and healthy Constitution of the Patient will bear it, The same ought forthwith to be cut out with a Knife.
3. If it is of an old standing, and from its colour, hardness, unevenness, itching and beginning pain known to be malignant ; if from the Seat and adjacent Parts there is reason to fear, if it is adherent to several Vessels, and in an ill habit of Body, Then is it impossible to Extirpate it : Then ought all things to be avoided, which may increase the Motion there, that it may not turn into a Cancer. So that all emollient, suppurating, eating, caustic and dissipating Medicines or Applications are here forbidden.

4. But

4. But only those are of use mention'd (490. N^o. 3.) that is, Anodynes, such as quiet Motion, Medicines made of Lead and very gentle Mercurials.

491. If at the same time the Patients Constitution be bad, that ought above all things to be corrected by proper but gentle Means.

Of Cancers.

492. If a Schirrus by long standing, increasing, and motion of the adjacent Parts is thus moved, that the neighbouring Vessels around its edges begin to inflame, it's become malignant, and from its likeness to a Crab, is now called a *Cancer*, or *Carcinoma*.

493. In which we discover the Conditions of the first Degrees of Malignancy, from the light Degrees of Inflammation all round it, from an exuberancy of a putrid Acrimony in the very Part; from the use and dignity of the same Part, from the number and condition of the annexed Glands; and lastly, from the ill habit of the Patient.

494. If it be still contain'd within its proper Skin, it's an *Occult Cancer*; but if that Skin be already broke through by an Ulcer, it's called a *Manifest* and an *Ulcerated Cancer*; this last is the offspring of the former.

495. The Cause of a Cancer is all that produces a Schirrus. (484, 485.) A Sharpness convey'd into and mix'd with the Schirrus; An alteration in the Circulation of Humors, from the Menstrua, Hæmorroids or any other Hæmorrhagy being suppress'd; Barrenness, abstinence from all

Venereal Acts ; the leaving off of Child-bearing from the Age of 45, to 50 ; An austere, sharp or hot Diet ; the several and even contrary Affections of the Mind, whether Melancholy or Anger, and the like ; Any external irritation of the Schirrus by it's Motion, Heat and Acrimony ; or Medicines which by their emollient, suppurating, caustic or blistering qualities will produce the same Effect, whether outwardly or inwardly applied.

496. Its Seat is the same with a Schirrus. (484.)

497. The presence of an *Occult Cancer* is known from the Signs of a Schirrus (487.) having preceded ; and as an Addition, there is a titillation, itching, heat, redness, a tearing, burning, and poignant Pain ; if the Colour changeth from reddish, to red, to purple, blue, livid and black ; if it is grown very hard, uneven and rough with a pointing top ; if the Tumor is encreased, and the adjacent Vessels also are swell'd with Nodes and Varices, and their Contents look thick and black.

498. An *Ulcerated Cancer* is known such from having had first sure Signs of the preceeding *Occult* one, when that is uncovered ; Then is the Skin laid open as by an Excoriation, and there oozes out a very thin and sharp watry Blood.

499. Its progress is thus : The *Undamaged Vessels* being worn out about the Margins of the hard Cancer by the power of the flowing vital Liquid, and pull'd asunder by the rising Tumor, *are at last broke* ; hence a Putrification ; then a subtle,

subtle, sharp, stinking, cadaverous Matter, preying upon the surrounding and eating through the next adjacent Parts, still gaining ground all around, and shooting its malignant Roots every where deep into the adjacent Muscles and Vessels, by means of which it fastens it self; The Lips swell, are turn'd up, and of a frightful Aspect. Now the Pains begin to be insupportable, burning, pungent, and gnawing; the Colour is of ash, then livid and black; Occult Cancers now begin to communicate themselves to other distant places in the Body; at last come on Hæmorrhagies, Convulsions, slow hectic Fevers, a wasting of the whole Body; it becomes void of Stench or any Odour, there grows painless Callosities in the Ears, the Patient faints away frequently; so that when all the Substance of the affected Parts are eaten through, and the whole Body is consumed, Death follows as a necessary consequence.

500. In People of a sound habit of Body, an occult Cancer unprovoked may easily be bore; but if they meddle with it, you may foretel what was just now mentioned.

501. A small, beginning, loose Cancer, seated in a convenient place, not adhering to large Vessels with its Feet, occasion'd by an external Cause, in a youthful and healthy Body, without having any other Companion in the Body, ought forthwith to be either pull'd out, or the Part, in which it is, to be cut off.

502. All Emollient Medicines therefore, such as shut the Pores, suppurating, sharp, excoriating, vesicating, and Caustics are to be avoid-

ed, for their Application certainly doth convert it into an ulcerated Cancer.

503. A large Cancer, an old and adherent one, situated in places unfit for Extirpation, grown to large Vessels, or lying close upon them; arising from an internal Disposition and Cause, in an old Body of an ill habit, enclin'd to breed Cancers, when there are already some other Cancers in the same Body; ought not to be meddled with at all, neither by Cutting nor Physick.

504. For unless it can be rooted out entirely, with all its Roots and Seeds, it will grow more ill-natur'd, turns upon some inward Parts, begets more, and enlargeth those already produced.

505. The Cause of the Cancer ought to be removed with the Cancer, or even before it be taken out.

Unless it can be taken out entirely it ought to be relinquish'd.

Those of the Uterus, of the Throat, of the Palate, of the Armpits, and of the Groins, are incurable; those of the Lips very difficult to Cure.

506. If therefore the Case is as in (503.) we endeavour at Two things: 1. The keeping of the Evil dormant and quiet. 2. The asswaging of the Symptoms.

507. It is kept quiet, 1. By defending the place from all external Injuries by Lead Medicines and Opiates. 2. By lessening, correcting, or diverting the known Cause: whereto belong gentle Purges from Vegetables or Mercurial Preparations given often, but in small Doses. 3. By
diluting

diluting and gentle opening Medicines and moderate Alkali, as Testaceous Pouders, and the like.

4. By avoiding every thing which might be a supply to the inward Cause, whether applied outwardly, or inwardly taken.

508. The Symptoms may be asswaged by the same Means, and acute Pains require Opiates in pretty large Doses.

509. An ulcerated Cancer, unless it may be extirpated, requireth for Ease to be cleans'd often, and to have the softest cooling Preparations of Lead applied, besides the use of what is contain'd in (507, 508.)

510. The Extirpation is perform'd, 1. After having first prepar'd the Patient with a strengthening Diet and Medicines, and such as are contrary to the Cause. 2. By cutting out the whole altogether and at once with all its Roots, having run a strong Thread through the Body of it, or holding it up with a Fork thrust underneath it, or having laid it bare, and separated its Integuments from the adjacent Parts and Vessels by lifting up the same by a Thread run through it, and at last loosening the whole on all sides with much caution. 3. The Wound then remains to be cured, which ought to be done by laying on a Bandage very gently, and dressing it but seldom, having first squeez'd the Blood out of all the surrounding Parts.

511. After this, the Patient ought to continue very long the same Diet and Medicines as if he had still a Cancer. And from the precedent Aphorisms it is plainly enough foreseen what ills must

must be expected from a Cancer situate in places unfit for Extirpation.

Of the Diseases of the Bones.

512. The very Bones are subject to the like Distempers as we have been hitherto describing as incumbent to the softer Parts.

513. For the Interstices of these are cloath'd with a thin Membrane, endow'd with the same kind of Vessels, and moist'ned with the same sort of Liquors continually convey'd thither.

514. And as those Distances are greater, so do the Bones come nearer to the Structure of a softer Part.

515. And are therefore more apt to suffer the same Diseases as the softer Parts are mostly subject to.

516. Such is the wider part near the Joints, whereas the Bone is closer in the Middle, and has fewer Vessels, and them smaller.

517. Hence (514, 515, 516.) the first distinction of the Diseases of the Bones.

518. The Bones, besides the Vessels, which they have common with the softer Parts, have in their wider Cells, Vesicles full of a subtil Oyl and Marrow, which is there separated and laid up for their particular Uses : These Vesicles larger near the Joints, are gradually abolished near the closeness of the Bone, and being changed into very minute Channels dedicated to the conveyance of Fat, almost vanish away and disappear.

519. Hence another Class of Diseases in the Bones.

520. The

520. The Bones have on their outside a Periosteum embracing and covering their convex Part, conveying the arterial Vessels into those Cells and into the Marrow receiving the Veins; which are some large, some small, but infinite in Number.

521. Hence the Third Class of Diseases in the Bones.

522. The Bones have another Periosteum on their inside, surrounding, and covering the concave receptacles of the Marrow, distributing the arterial Vessels into the medullar Vesicles, receiving the Veins; And they also are large, small, and infinite in Number.

523. Hence the Fourth Class of Diseases in Bones.

524. The Bones have in their Cavities infinite Vesicles full of medullar subtil Oyl, preserving the same, distributing the same not only mutually amongst themselves, and between the interstices of the Plates, but also in the Cavities of the Joints, and through the straight Pores. These Vesicles have Arteries, Veins, Lymphatic Ducts, Channels to convey Fat, small Nerves and Membranes.

525. This constitutes the Fifth and last Division (in this Kind) of the Diseases in Bones.

526. If the Medullar Oyl doth stagnate in its Vesicles, conveying Vessels or in the interstices between the Plates of the Bones, it becomes sanious, sharp, and rotten by its heat and vital Motion; it puts a Stop to a fresh Secretion, it will close the conveying and secreting Vessels, it will
I 4 inflame

inflamm its Vesicle, bring it to a Suppuration, or corrupt both Liquids and small Vessels into a gangrenous Putrifaction; hence the very Substance of the Bone being robbed of its Vessels, depriv'd of its vital Liquid, eaten through by acrimonious Juices, is turned as it were into an Ash-colour'd Chalk, where it is thinnest, that is in the Cells of the Processes; from whence follows, a Pain, Heat, Throbbing, Swelling, Impostume and a Rottenness of the worst kind. This Stagnation may proceed from any Obstruction (see what has been said about them). But if it comes from an internal Disease, then doth it almost deserve the Name of a *Spina Ventosa*, the worst of all Diseases the Bones are capable of.

527. It appears that the Signs of this Disease and its State as in (526.) are the Signs of a deep Inflammation, not shewing itself on the Surface of the flesh nor discernable by feeling,

528. From the difficult separation, cleansing, absterfion, &c. many Ills may be foreseen and the Cure be pronounced very difficult.

529. The Cure is best of all attempted, 1. By filling all the Vessels copiously with Decoctions made of such as do penetrate powerfully, are very cleansing, and resist putrifaction. 2. Then by putting all the Humors in a strong motion by occasioning a profuse Sweating by means of Spirit of Wine set afire and directed to the Body of the Patient at a convenient distance under the Bedcloaths, or any other way. 3. And at the same time while the Patient is sweating, by directing the strongest motion towards the Part affected by topical Fomentations of hot Steams.

530. If this be long continued, it often doth a great deal of service, chiefly if at the same time the Patient observes a small Diet, directed against the oily Putrifaction.

531. If the arterial, nervous, and likewise the lymphatic Texture be obstructed through the defect of new Liquids, or the stoppage of those already convey'd, the same Diseases will again ensue as in (526) differing only in rank and order of Succession.

532. Of which consequently the Diagnostic, Prognostic and Cure are the same as in (529) (530.)

533. And it is plain that the difference of Danger is chiefly from the difference of Place where the first Cause of the Distemper is grown and seated: Which having first denoted, the Rules will be easier understood.

534. 1. That Inflammation of the Bone will be the mildest, which is occasion'd by the Inflammation of the external Periosteum, whereof the Causes are numberless (see the whole History of Inflammations) and its Effects are known.

2. It is known from the Signs of a deeply seated Inflammation, which upon a pressure encreaseth.

3. A great many Ills are foreseen, unless soon cured.

4. The Cure is like that of an Inflammation, chiefly by taking care, that the whole mischief may be drove out from the Bone to the Surface of the Body, which is obtain'd by Fomentations and sometimes by Incisions to the very Bone.

535. That

535. That such an Inflammation is tending to an Impostumation is apparent 1. from strong Signs of a violent Inflammation before. 2. a Throbbing, a Fever, and by fits great Tremblings and Shiverings with the Hair standing an end. 3. The absent Signs of a Resolution (386.)

536. That the Impostumation is already present is manifest from the Signs of a Suppuration lying deep under the Surface (see 287. 405.)

537. The Consequence thereof is, that the Pus having gnaw'd the Periosteum through, doth uncover the Bone, robs it of all its Vessels there, and soon corrupts it, (see 406.)

538. Wherefore the Impostume is to be open'd immediately, the Pus to be let out, the Ulcer to be cleans'd (403. 404. 469. to 411.) and then ought the Bone to be treated by the same cautionary Rules as in the Case of the Wounds of the Head when the Cranium is laid bare (See 252. 3. 259. 260. 262. 266.)

539. That this Inflammation is tending to a Gangrene of the Part, is known, 1. From the Signs of a precedent excessive Inflammation. 2. The ceasing of Pain without any good reason for it. 3. A thick, slow and very little painful Tumor of the incumbent Muscles and Parts.

540. That the same is already present is known from (539.) and from the pale, ash and livid Colour of the incumbent Parts.

541. Then is the Bone now become bare and depriv'd of its vital Liquid, consumed into a Caries by the sharp, putrified, gangrenous Matter, and spreads quickly infecting all around it.

542. So that the Place ought immediately to be laid open to the very Bone, and to be cleans'd; As for the Bone it is again to be cured as in (248, 249. 252. 258. to 266.)

543. If the inward Periosteum (522.) be inflamed, it acknowledges the same Causes as (534.) and, as to the inward side of the Bone, the same Effects; it ends either in an Imposthume or a Gangrene, but of a much worse Sort, because no parts of the Evil can be made to exhale; whence the whole Marrow, and the whole Bone must unavoidably perish, with a most stinking and horrid Caries.

544. Whence it also appears, that whether this Membrane be first seized with an Inflammation, or whether it received the Harm from the Marrow it self originally inflamed and communicating the same, That the Distemper call'd *Spina Ventosa*, must soon follow with all its dreaded Effects; which hitherto has mostly proved incurable. (See 526.)

545. This Disease is known, when it yet continues within the Bounds of an Inflammation,
1. From the general Signs of Inflammations.
2. From the depth of its Situation. 3. From an obtuse fix'd, long continued Pain, yielding to no Remedies whatsoever, nor encreasing at the pressure of the Hand. 4. Which however encreases after a Motion of the Muscles.

546. It is cured, 1. By the Method used in all Inflammations (from 325. to 401.) and then as soon as the Signs of a Beginning resolution appear. 2. By the Method proposed in (529.) being strictly persued,
547. But

547. But if either a Suppuration or a Gangrene ensueth, and is certainly known from the Signs of a preceeding ill-natur'd inward Inflammation, and from a fixed, deep and obtuse Pain; Recourse must be had to the Method in (529.) for if that doth not, nothing will Cure.

548. For the whole inward Substance of the Bone being then rotten, and the inward Bone being tumefied, inflamed, and carious, the outward Periosteum is inflamed, pull'd asunder by the Tumor, and gnaw'd through by the Acrimony; The incumbent Parts being spoil'd by a slow Contagion grow spongy, tumefied and painful; The whole Limb is lost. Nothing is left for it but Extirpation.

549. A pocky, scorbutick, and ricketty Quality is often the Cause: Hence may be understood, what is a *Gumma Gallicum*, Venereal Tophi, Nodes, Excrescencies, Imposthumes, what a Caries of the Bone, and a Spina Ventosa.

550. Hence we know, why a carious Bone doth so often change its Colour, from a blewish, white, into a fattish white, into a yellow, ash, livid, and black Colour. And what degree of corruption is indicated by each of them.

551. From the same Reasons it is plain, why a Carious Bone grows by degrees first uneven, then rough, spongy, friable, soft, and very brittle.

552. And also why the same exhales a Stench like to rusty Bacon.

553. And why in an ulcerated Part occasion'd by a Caries underne th the incumbent Flesh is soft,

soft, flagging, fungous, bloated, and swell'd; the Lips of the Ulcer turn'd up; the ulcerous Matter be clear, thin, somewhat glewish, stinking, and full of little black Scales; Why the same doth always break out again without any external Cause, and obstinately refuses to be conquer'd by all Remedies, which never fail of curing Ulcers of another Kind.

554. And also why a Caries from an External Cause is easily cured; that from an Internal Difficulty, from the great Pox more difficulty, and that from a Spina Ventosa the most difficult of all.

555. Lastly, Why a Caries in the solid part of the Bone be bad? worse in the Spongiuous part, and the worst in the Joints? Why the first be slow, the next quicker, and the last the quickest of all? Why the same gains quick in Children, and is so difficult to cure? And why the Spina Ventosa doth most times shew it self in several places at once, or successively? "As I have known in a "worthy Minister of the Protestant Church of "Rochel, who since his being a Refugee at Leyden, lost both his Arms successively.

556. Whoever adds to these (from 512. to 556.) what has been said of Contusions (from 249. to 257. and 325.) and of Luxations (from 358. to 370.) and of Fractures (from 339. to 358.) and also what has been said of the Wounds in the Head where the Bone was offended (from 249. to 297.) He may safely think he possesseth the whole History of the Diseases incident to Bones, and almost all the Methods to cure them. Chiefly
if

if we add to them what may be said of the *Anchylosis*, which is an immoveableness of the Joint with a hard Tumor, owing its origin chiefly to the Callus of a Bone broke near the Joint, or to the thickned Liniment of Havers, or to the shrinking of the Ligaments or Tendons, or a Protuberancy near the Joints. The Cure whereof is very difficult, and requireth different Applications according to the difference of the Cause.

557. *Whoever* now has understood all the Diseases hitherto describ'd, and has been an Eye-witness of 'em, so that he hath well and duly weigh'd the Causes of 'em, their Nature, Effects and Cure; and hath afterwards applied all these to the internal and hidden Parts of the Body, compar'd them with the Action of the entire and whole Parts, and at last with the Phenomena of internal Diseases; *He* will find that the internal Operations agree exactly with what he has seen in the external Parts: That therefore a System of Physick ought to begin with the Chirurgical Diseases; and that no other Method can lead so well to the plain and easie Knowledge of truth in Matters of Physick.

O F
INTERNAL DISEASES,
AND
Of *FEVERS* in *GENERAL*.

558. **A**ND now is the most Natural Time to treat of a Fever which is a most common Distemper, an inseparable Companion of Inflammations, the Cause of a great many Diseases, of Death, and often the most effectual Means to recover some Diseases.

559. And whereas it is a most common received Notion, that its Nature is hid and unconceivable; so we ought with all our Prudence to avoid falling into any Error in the Search after it.

560. And yet it is very easie to be mistaken herein, because of the many and various Symptoms which usually attend a Fever, and without which notwithstanding the same may be and subsist.

561. To avoid Error therefore, it will be necessary to chuse of an infinity of Symptoms, those only which are always present in all Fevers, and whose presence perceiv'd, makes the Physician sensible that there is actually a Fever, and which being absent, do inform him again that his Patient is free from any Fever.

562. Then from the Discovery and due Consideration of these the individual and specifick Nature

ture of a Fever is to be found out and known.

563. In every Fever produced by an internal Cause, there are to be observed at some time, and in some degree, a Shivering, a Quick Pulse, and a Heat.

564. The Fever in which these three Phænomena are quickly run off and with Danger, is call'd an *Acute Fever*.

565. Where they do run off slowly, either with or without endangering the Patient, that Fever is call'd a *Slow* one.

566. Both of 'em may either be Epidemical or common to the Generality of People at a certain time, or only particular to this or that Man.

567. Diseases which the Fever (in 564.) doth accompany, are called *Acute febrile* Distempers; those as have that (of 565) are call'd *Chronical*.

568. So that the nature of a Fever in general ought to be known before one treats of them in particular.

569. Which knowledg must be taken from the thorough consideration of the three common Symptoms (in 563.)

570. Which are present in all Fevers, but of the three there is only the quick Pulse, which is always present from the beginning to the end; so that the Physician may from that one Phenomenon alone when present conclude, there is a Fever.

571. Therefore whatever the Physician doth thus know of Fevers, may be known altogether as well from the only one Symptom of the quick beatings of the Pulse.

572. So

572. So that the proximate or nearest Cause of this quickness is also the nearest Cause of a Fever hereby discover'd.

573. That is, a quicker than the natural contraction of the heart.

574. Consequently a too quick reciprocal Influx of the nervous Juice and that of the Cerebellum into the Muscles and the Ventricles of the heart.

575. Almost every Fever which has hitherto been taken notice of, which proceeded from an internal Cause, begins first with a sense of Coldness, Shaking, Shivering greater or less, longer or shorter, inwardly or outwardly apparent, according to the different temper of the Patient, or the various Cause of the Fever itself.

576. At which time the Pulse is quick, small and often intermitting, the Extremities are often pale, cold, stiff, trembling and void of feeling.

577. From whence it appears, that then the bloody Humours do stagnate at the ends of the Capillary Vessels, and that there is notwithstanding at the same time some Cause that irritates the Heart.

578. Whence (577.) the Cause of all the then present Phenomena is understood.

579. In all Fevers, after the Symptoms of (576. to 577.) there ariseth a Heat, which is greater or less, of a long or short duration, internal or external, general all over the Body, or particular in some part, according to the variety and differences of Fevers.

780. Which Heat, as it follows the preexistent Fever, ought rather to be taken for its Effect than for its Cause or Nature.

581. So that the too quick contraction of the Heart, with an increased resistance at the end of the Capillary Vessels is sufficient to compleat in us the Idea of all acute Fevers.

582. And either of these two may be occasioned in a living Animal by Causes infinite in number and variety; and they may happen both at once or singly; and when the one is produced the other soon follows.

383. So that the nearest Cause of a Fever acknowledges numberless Causes for its nearest.

584. Which however are divided, as they are either singular to each, or universal and common to many; which last are generally owing to the same Air, Diet and Way of Living.

585. So that the Causes of Fevers are Singular or Epidemical.

586. The nearer Singular Causes may be reduced under some Heads. α . The things received or conveyed into the Body being sharp and pricking, whether called Meat, Drink, Medicines, Preservatives or Poison, when endow'd with that propriety that they cannot be digested, moved, nor evacuated; or when taken to such a Quantity as to irritate the Stomach, to choak up, to obstruct, and to putrify within the Body. β . The things retain'd in the Body, which used to be evacuated each their proper Way, and that because of some Cold, Unctions, Vapours, some thick and fat Meat, Drink, Medicines, Poisons, or Air; too long

long continued Rest, some usual Exercise omitted, Obstructions and Compressions from either the contain'd or surrounding Bodies. γ . The Gestures; as the too great disturbances of the Mind or Body, occasioning heat and tossings. δ . External Applications that are sharp, pungent, gnawing, tearing, burning, or inflaming. ϵ . Those that change the Humors and their Motions much, which abundance of Externals as well as Internals will do; Hunger, great Evacuations; Collections of Pus, Water and watry blood in Dropsies and Empyemas, or sharp Serum; Choler being inflamed and burnt; Suppurations, Gangrenes, Cancers, too much Waking, too intense Studies of any Kind, and Excess of Venery.

587. The Effects of a Fever are, A too quick expulsion and propulsion of the Liquors; too great an Agitation of the stagnating, and a Mixture of all; an overcoming of what resists, and its Coction; a Secretion of the concocted Matter, and a critical Evacuation of what had occasion'd the Fever by its Coagulum and Irritation; a change of the sound Liquors into a diseased State; a change of the sound Parts into a condition able to bear many things which the Patient was not used to before; an Expression of the most liquid and thin Juices; a Thickning of the Remainder; a Drought, Heat, Pain, Anxiety, Weakness, Weariness, Heaviness, loss of Appetite, and Nauseousness.

588. The sooner the stagnating Liquids are to be resolv'd and the Irritation is to be allay'd (577.) so much the slighter and shorter will be the Fever and tending to Health; and so on the Con-

trary : and the Fever will also vary according to the different Degrees and Concourse of both.

589. And thence one may learn that a Fever may often be a Medicine very instrumental in the Cure of other Diseases. Such as the Palsie, &c.

590. Hence the beginnings, the increase, full height ; the declension, crisis, changes and cure of Fevers are various in the very acute ones, and even in the Singular Kind.

591. A *Fever terminates* in Death, another Disease, or into Health.

592. *In Death*, through the fault of the solid parts being destroy'd by too great violence ; or from the Liquids being so far deprav'd, as that they obstruct the Vitals, or those Parts through which new Liquids must needs pass, to supply the room of the wasted. Hence Inflammations, Suppurations, febrile Gangrenes in the vital Bowels, the Heart, Lungs, Cerebellum : Or Aphthous Ulcers in the Stomach and Guts, which by shutting up the Lacteal Vessels, so as not to admit of either Nourishments or Medicines for a considerable time, must needs prove Mortal.

593. *In another Distemper*, As the same doth hurt the Vessels through too great an Agitation, and by dissipating the thinnest Liquids thickens the rest ; Or as it is not able to resolve entirely what it has first occasion'd to coagulate ; Or by depositing its Critical matter in some obstructed, dilated, or broken Vessels ; hence the red and scarlet Spots, Pustules, St. Anthony's Fires, Measles, Small Pox, Phlegmons, Buboes, Swellings behind the Ears, Imposthumes, Gangrenes, Sphaceles, Schirrus Tumors, &c.

594. *Into*

594. *Into Health.* 1. Whenever it overcomes with its own power the material Cause of the Fever, doth break it, makes it moveable, drives it out by the insensible Perspiration, and at the same time lays asleep its own violence by re-establishing an equal Circulation of all the Liquids. This is the Method of Resolution, which is very near the same in a Distemper of the whole, as it was shewn in a Disease of a particular Part (See 386.) 2°. Or if the Matter of the same Disease being overcome by the power of the very Fever, be loosen'd and render'd Moveable, yet has retain'd one particular quality, which will hinder an equal Circulation, and yet stimulates and irritates the Vessels, and is for that reason drove out by some sensible Evacuation which it occasions; such as Sweats, Spitting, Vomitings, Diarrhæas, and Urine, after the Coction and height of the Fever, when the Crisis is compleated almost within the fourteen Days.

595. Lastly, a Fever terminates into Health; If the matter of its Cause being overcome by the strength of the Fever, loosen'd, made moveable, and made again like unto the sound Liquids, flows without any Crisis, or any other Distemper succeeding.

596. The Genius, Danger, and Duration of an acute Fever, if well taken notice of from its beginning, increasing until the height, will instruct the Physician, how the same will go off, change and terminate.

597. So that from all these (from 558. to 597.) the general Heads of the Diagnostic and Prognostic in Fevers may easily be drawn.

598. The best Method to cure a Fever in general, is to be learn'd from these Rules, 1. Chief care must be taken to preserve Life and vital Strength. 2. The sharp irritating Cause must be amended and expell'd. 3. The tough sluggish Humors must be dissolv'd and expell'd. 4. The Symptoms must be mitigated.

599. Life and vital Strength is preserved by a fluid Diet of such as are easily digested, are contrary to Putrifaction, and to Thirst; as are apt to uphold or increase the Appetite, and in all respects are contrary to the known Cause of the Disease.

600. Nourishment ought to be given when the Fever is either off, or when it remits and is least violent.

601. And then in moderate Quantities but the oftner repeated, that the Bowels may not be put to too great Labour, or be thereby altered.

602. The Quantity to be given, and their degree of Strength is determin'd, 1. From the foreknowledge of the Fevers short or long Duration (588. to 590. 596, 597.) Whether 1. 4. 7. 9. 11. 14. 21. 30. 40. 60. Days. For so much ought to be given as will suffice to carry the Patient through not only the Coction, but also the Crisis. The shorter the Disease is like to be, so much the less in quantity and weaker in quality, ought to be given, and so on the Contrary. 2. From the known Age of the Patient; for all Animals bear Hunger the least, as they are nearer their Birth or very old Age. 3. If the state and violence of the Disease are known, different Diet as to quantity

tity and quality ought to be allow'd; In the height give the least and the lightest Food; at the increase or decrease give so much the more, and so much more nourishing as you are distant from the height of the Disease. 4. From the Country as the Patient is of, or which he actually inhabits; for those nearer the *Æquinoctial-Line*, bear much easier a spare and thin Diet than those nearer the Poles, whether North or South. 5. From the Season of the Year, for the Summer requireth very thin, but the Winter more substantial Food. 6. From the Custom of the Patient, and his natural Constitution; for he who in health has been used to high Living, and a very nourishing rich Diet and bore it well, the same when ill, has occasion for more Food, than another Man, because his Vessels and Bowels are used thereto. 7. From the lying easie or heavy, agreeing or disagreeing of the Things given to the Patient.

603. Sharp irritating Bodies when known to be outwardly adherent to the Body (such as the acute Fragments of Glass, of Metals, Wood, Stone, or Bones, or the Applications of stimulating, redning, gnawing, blistering, caustic, putrifying or poyson'd Bodies, are to be removed forthwith; then the Place where they were affixed, and has received Damage thereby, ought to be fomented with soft, mucilaginous, kind, oily, anodyne and opening Medicines.

604. An irritating sharpness being within the Body (such as is all acrimony from a sharp and stagnating Lympha, Pus or Ichor, producing Inflammations, Suppurations, Gangrenes, Sphaceles, Cancers,

Cancers, and rottenness in the Bones) ought either to be removed or to be corrected, according to the Rules heretofore laid down in the History of those several Diseases.

605. An irritating Acrimony brought and mixed in the very Liquids, may and must be either removed or corrected by the Use of the six Non-naturals, using different means according to the different Nature of the said Acrimony.

1. What came from too much motion requireth rest of the Body and Mind, and to be corrected with moistning, diluting, and kind softning Medicines and Diet.
2. That which was occasion'd by the too great heat of the Air, is cured by temperating the same with cold Springs, some certain Plants fit for this purpose; giving the Patient water to drink somewhat acid and impregnate with Nitre, together with a little mixture of tart Wine; Meat somewhat sourish, gently softning, a little saltish, and Medicaments of the same Class.
3. That from too moist an Air is corrected by making large Fires with aromack and resinous Wood, and Exhalations, and Fumigations of aromatic Herbs and Plants.
4. That from a sharp and putrifying Air is mended by firing Gun-powder, Nitre, Steam of Vinegar, and strewing common Salt upon live Coals.
5. That from Affections of the Mind by quieting the same, by reasoning or Perswasions, by raising contrary Passions, offering different and various Objects, by Anodynes and Opiates.
6. That

6. That from acid sharp Meats, by diluting that sharpness, asswaging, absorbing, and changing into a compound Salt : This is also effected by the continued use of watry Eatables ; Jellies of animal Juices, oleous and cretaceous Food, all sort of Cockle and Shell-fish, Stones of Animals, fat Earths, Alcaline fixed Salts, volatile, simple and compound. (See from 60. to 69.)
7. That from sharp salt Meats, by diluting that Acrimony with watry Roots and Herbs, and evacuating them at the same time ; softning with smooth and oleous Food, and correcting them with Lixivious Broaths or Decoctions from Quick-lime.
8. That from sharp, aromatic and hot Meats by diluting, correcting with Acids, resolving and cleansing with acid and soapy Medicines and softning with mild Jellies. And whereas the alcalious Acrimony belongs to this Class, it is easie to adapt the Rule to them.
9. That, from Meats taken from the most easily putrifying Parts and Kind of Animals, is removed by those described (from 76. to 91.)
10. That proceeding from an over-eating, by which the Stomach is ty'd up, is remov'd by diluting them with large Quantities of warm Water, by Fasting, Vomiting or Purgings.
11. That from stale fermented, or yet fermenting new Drink, acid, oleous, aromatick, distill'd, or in its natural simple State, that Acrimony, I say, once convey'd into the Blood is removed by the same Remedies as are set down in the Numbers 5, 6. 8. of this *Aphor.*

12. That

12. That from too much waking is cured by the same, as in N^o. 1, 2, 3, of this *Aph*.

13. If an alcalious, an acid, oleous or putrify'd saponaceous Acrimony is occasion'd by the retaining of Excrements in the Body; those ought to be made to flow, the Ways are to be made slippery for 'em; the Emissaries to be open'd, the expelling Faculties to be stimulated, increased; all which must be done both by External and by Internal Means.

606. The Outlets or Emissaries are open'd, by loosening what was sticking fast, relaxing the obstructed Vessels; which is accomplish'd by Bathings, Fomentations, Rubbings, Shaving of the Hairs, and Cleansing of the Skin. (See from 107. to 144.)

607. That which stagnates at the Extremities of the Conic Vessels, from the too great quantity of Blood, by which the Vessels are press'd on their out-sides, is made to flow and circulate again by means of opening a large Vein: This is known from the Signs of a Plethora (in 106. and 107.)

608. Whatever sticks at the ends of the Capillary Vessels, because of their Fibres being contracted by a Cramp or convulsive Motion, and hence made narrower, is loosen'd by relaxing the Fibres, (See 53. to 55.) and by carrying off the Sharpness which occasions that Contraction, (See 35, 36. 54. 66, 67. 88. 102. to 105. 127, 128.) from whence you may borrow all that is necessary here.

609. That which sticks because of its own natural Slyminess and Sluggishness, may be loosen'd
many

many ways, whereof the Chief is to moderate the strength of the Fever thus, that it may be able to dissolve that Coagulum, (587. 589. 593, 594.) And therefore it is requisite that its Violence be thus temper'd, *α.* That the same may not produce Inflammations, Imposthumes, Gangrenes, or Sphaceles, (592.) the Danger of which to be at hand is learn'd from the vehemence of the Symptoms, chiefly of Heat, compared with the resisting power of the Vessels. *β.* That the Liquids may not be dissipated by too much Motion; which is foretold by the dryness of the Nostrils, Eyes, Throat, and Tongue, by a Hoarseness, dry Skin, paucity of Urine, a small, quick, and unequal Pulse. *γ.* Nor that the Motion be too much abated before the Coction of the febrile Matter, which wou'd disable the Blood from overcoming, moving, separating and driving out the Matter of the Disease: That there is Danger of this is known from the vital Actions becoming altogether languid, without the apparent Signs of a Coction.

610. If then the Motion is perceiv'd to be exorbitant, it is moderated by Abstinence, thin Diet, drinking of Water, a cool Air, quieting the Mind, Bleeding, cooling Glysters; by soft, watry, glutinous, cooling, anodyne, and opiate Medicines, (See 92. to 106.)

611. If the Motion be too slow, it may be quickned by the help of cordial Meat and drinking of Wine, by a warmer Air, by raising the Passions of the Mind, by stimulating Medicines, such as are volatil, aromatic, and fermented; by Frictions,

Frictions, Heat, muscular Motion, Bathings and Fomentations.

612. After the first Remedy in (609.) which removes the Viscidity, the next is to restore to the Vessel its Elasticity, which is obtain'd by lessening the quantity of the Liquid, by letting a great quantity of Blood flow quickly out of a large Orifice made in a great Vein; and afterwards or even then increasing the Motion by stimulating Means.

613. Thirdly, that same Viscidity is made fluid by diluting it with Drink, Bathing, Fomenting, Glysters, and watry Means and by Frictions at the same time.

614. This will be the better accomplish'd if the Patient takes the watry and salt Means as hot as he can drink 'em, or the bitter, aromatic-milky Herbs cold.

615. Which that they may well, quickly, safely and powerfully act, a Bleeding ought to be premis'd, for it makes way for 'em, they mix and act the better after it.

616. At the same time as this Viscosity is resolv'd by the Means (from 609. to 615.) it may be push'd and drove out by the same continued or even encreased; But this will sometimes be corrected so entirely as not to want Expelling (594. N^o. 1.)

617. The Symptoms of a singular acute Fever are chiefly these: A coldness, shaking, anxiety, thirst, nauseousness, belching, vomiting, weakness, heat, tossing, dryness of the Skin, &c. Delirium, Dosing, obstinate Wakefulness, Convulsions,

fions, Sweats, Loofness, and Inflammatory Pustules.

618. All which arising from the Fever (581. 587.) as its Cause, if the same be removed (594. 595. 598. to 617.) will cease of course; and therefore if they can be bore without indangering Life, they scarce require a particular Cure.

619. And even sometimes they proceed from an effort of Life, disposing it self for a Crisis, or an evacuation of the Critical Matter; The which Excretion they precede, accompany and follow, and ought not to be interrupted.

620. But if the same come out of time, if too violent to be overcome or bore by the vital strength or the patience of the Patient, or are like to produce some greater Ills; Then ought each of 'em to be allay'd by their proper Means, having always an eye to the Cause and the State of the principal Disease, the Fever. (590.)

Of the Cold Fit in Fevers.

621. The Cold which happens in the beginning of acute Fevers supposeth a less attrition of the Liquors against each other and their Vessels; the lessening of the circular motion; a stagnation of the Liquids at the Extremities; a less Contraction of the Heart, a less quantity of Blood forced out of it; and the animal Spirits flowing less from the Cerebellum to it.

622. It occasions, if continued long in a great degree, Polipous Concretions in the larger Vessels and about the Heart; and in the lesser Vessels by emptying their Liquids produces Evacuations;

cuations; whence great and many evils in both.

623. Hence it is evident what denotes, what it doth foretell? And why the Fever is more dangerous in proportion as the cold Fit has been violent? Why in the beginning of a pestilential Fever the cold Fit is in the greatest degree of violence, and on the contrary the heat is as violent when the same is farther advanced.

624. This Cold when attempted to be removed by all kinds of stimulating means under whatsoever Title or Denomination; though of the most powerful kind, yet has often produced an insuperable and incurable Inflammation. So that in this Case all saline-sharp, aromatic, oleous, blistering and such like Remedies ought to be avoided.

625. But it is best cured by drinking hot Water with some Nitre, Honey and Wine; by the using of Bath, Steams, Fomentations and Lotions with hot Water, and by moderate and continued Frictions,

626. Which being immediately applied upon the first Invasion of the cold Fit, have often cured at once most dangerous and acute Diseases.

Of Febrile Shaking.

627. The shaking supposeth, A Wavering of the Muscles between their Tone and their Laxness; Causes now extending and soon after loosening them, and these motions succeeding each other shortly upon one another without the will of the Patient, and even against his will; The Influx of the arterial and nervous Juices sometimes absent sometimes present; and consequently argues

gues in the beginning of the Disease a rest of both those Liquids ; towards the end often too long an absence of the same, after an extravagant expence of the one or both.

628. If long continued it occasions Impediments in the circulation of Humors, and the Defects thence proceeding.

629. Hence must the diagnostic and prognostic of this Symptom be fetch'd : and hence it's apparent why shaking and cold go together (621.) Why a violent shaking is so pernicious ? Why great passions of the Mind occasion Shakings ? Why great Tremors about the approach of Death ? Why from too large Evacuations of any kind ? Why from an Excess of drinking any sort of Liquors ?

630. The same is cured by restoring the equal flowing and pressure of the arterial Liquor in the Arteries of the Cerebellous (that is Nervous) Liquor into the Fibres of the Nerves : This ought chiefly to be endeavour'd in the beginning of the Disease by the use of such things as do cut and attenuate the sluggish Humors, and restore strength (606. to 617.) But towards the end of the Disease by means of such which suddenly restore and supply the lost Liquids, and corroborate the Fibres and the Bowels.) See from 46. to 49.)

Of the Anguish in Fevers.

631. This Anguish is occasioned by the Blood being stopp'd in the very Heart, and consequently hindred from passing through the Lungs or the Aorta ; whence a Cramp of the contracted Vessels,

fels, or an impossibility to the enflamed Matter of passing through them : We have seen the same Effect from the Blood being hindred in its passage through the *Vena Portarum* in the Liver from the same Causes ; Whence, when all the Venous Blood, brought hither by the Coeliac and Mesenteric Arteries, cannot return, but stagnates, extends the Vessels, resists the approaching Blood convey'd through the Arteries, and consequently produces all the Evils bred and deducible from those Causes : It is apparent, that both these Causes of Anguish in all acute Diseases ought to be observ'd very diligently, and with all possible sagacity, and well assured as soon as possible.

632. If therefore such (631.) an Anguish continues long, it must needs produce about and near the Vitals polypous Concretions, Inflammations, sudden Gangrenes, with an intolerable sense of narrowness, and Death soon thereupon succeeding : But if the Seat of the Anguish is in the Hypochondria, then doth it create a most exquisite sense of Sickness and Pain at the Stomach, while the other Bowels are less sensible of Pain ; then sudden Putrifications of the Blood in those large Vessels of the Liver, which have a less elasticity and contracting power than those of other parts ; whence Gangrenes, a rottenness of the Liver, and from that same a mortal Bloody-Flux.

633. Hence the Physician may exactly know the Nature, Cause and Event of this Anguish (631. 632.) and at the same time will distinguish an Anguish only occasioned by a disorder upon the Nerves without a preceding Fever from that which

which owes its origin to an acute Inflammation, which then has shewn itself by its proper and peculiar Sign; and thence comparing these with the violence, duration, and Seat of this Evil, he'll be able to form a true Judgment of 'em all. Why doth *Anguish* almost in all Diseases perform the last part of the Tragedy just upon the point of Death? Why is the Nervous Anguish little, but the Inflammatory one extremely dangerous? Why are Restlessness, Tossings, Sighing, Panting for Breath and Constant Wakefulness the Fore-runners and Foretellers of Death in most Inflammatory and Imposthumating Diseases?

634. Hence also it appears, what different means are requisite to allay the violence of this Evil, which however are all known and usefully applied, as soon as the nature of this Symptom is known. For when it is plainly discovered that it is a Nervous Case, The Cause is removed by softening the irritating sharpness (603, 604, 605.) expelling the same with Vomits, Purges, Sweats, Diuretics, Abstersives; Diluting the same with warm and watry means; Quieting the passion of the Mind; Relaxing the Fibres, Vessels, Bowels; (35, 36, 54, 55.) Restraining the power of the nervous Juice, with Anodynes and Narcotics. But if the same proceeded from an Inflammatory toughness, that ought to be resolved, diluted; the Vessels to be loosen'd, the violence of the flowing vital Liquid to be bridled; This end may be answer'd by giving the Patient large Draughts of warm Water with Honey, Oatmeal, Nitre, Juice of Oranges or Limons, with a small Proportion
I. of

of the least hot Spices ; By Fotusses, Cataplasms, Epithemas, Plaisters applied to the affected Part, which make of Diluents, Loofening, Emollient, and Anodynes ; By Glysters often, but at the same time given in small Quantities, and kept as long as possible, which make of the just now mentioned ; By Steams of hot Water with some emollient Ingredients in it, which direct so as to let the Patient receive the same by his Nose and Mouth, and thence be convey'd towards the Lungs.

635. And indeed if any where, here doth the violence of the Evil require a speedy and safe Cure.

Of Thirst in Fevers.

636. Thirst owns for its Causes a driness of the Liquids, and their inability to flow ; a salt, alkaline, or a bilious and oleous Acrimony.

637. So that the same generally argueth the presence of one of them mentioned (in 633.)

638. And consequently is an Index that those Evils are coming on, which may be produced from the Causes said to be existent in this Case. (See 636, 637.)

639. So that the same always requireth present Remedies, chiefly in acute Diseases.

640. The same are, 1. Drinking of thin, watry, fourish, nitrous, softning Liquors, and them warm, often repeated but in small Quantities.
2. Fomenting the Nostrils, Mouth, Throat, with the like Liquids, Washing and Gargarizing also.
3. Laying about the Hypochondria Cataplasms,
Fotusses

Fotusses and other outward Applications of the like Matters. 4. Injecting Glysters, and getting them to be retain'd long, and made of things of the like kind.

641. But if the Patient is at the same time very drougthy and very weak, then ought winy, and spirituous Liquors to be mixed with the latter (640.) and then are Cordial Juleps given with a great deal of Success, and Safety.

Of Loathings in Fevers.

642. A Loathing infers vain reachings to vomit with a sense of Dread ; Its nearest Cause is therefore a slight Convulsion of the muscular Fibres of the Jaws, the Gullet, the Stomach, Intestines, and abdominal Muscles : Which is occasion'd, 1°. From a sharp, putrid, bilious Matter derived into the empty Stomach, rising towards the Jaws, pricking and twitching both, whence the other Parts follow the same Motion ; It's known from Fasting, a strong stinking Breath, foulness of the Mouth, Tongue and Jaws ; Or 2°. Is produced by a sluggish, viscid and floating Matter, which by watring those Parts doth also twitch 'em, and is discern'd by the Signs of a glutinous disposition of the Liquids having been first observ'd ; Or, 3°. From the Stomach, Gullet, Intestines, and the neighbouring Entrails being slightly inflamed ; which is discern'd by its peculiar Signs. 4°. From the remembrance of Things which formerly when taken used to occasion the like Loathings. 5°. Lastly, From the inordinate Motion of the nervous Juice, no matter whence arising ;

arising ; It's known by a Delirium, Convulsions or Catchings, Vertigoe's and Tremors.

643. If it continues long, it occasions loss of Appetite, an abstinence and aversion from Drinking and Medicines, and afterwards Vomitings ; and a great many Evils which follow from those, the chief whereof are a Weakness, a putrid alkaline Acrimony, and Drought.

644. The Loathing produced by the first Causes is amended by using Acid, Salt, watry Drink, Food and Medicines ; by giving gentle cooling Purges ; such as *Acton*, *Epsom* or *Shooters-bill* Waters with the Purging Salts ; by such acid and austere Medicines, &c. as do strengthen the Fibres ; Or even a Vomit if it cannot be overcome with the others. But such Loathings as are occasion'd by the second Cause, are carried off with diluting, attenuating, purging or vomiting Medicines. And if from the Third kind of Causes (in 642. N. 3.) they will not be removed, unless those Diseases be cured according to the Methods following. The Fourth sort is cured by not Thinking on the Occasion, or avoiding the taking of the like Things as did occasion them. And the Last sort is cured with austere, earthy, adstringent Medicines, Rest, Narcotics, and Cold-water.

645. Hence it is understood why, in acute Fevers with Loathings, a Purge or a Vomit given in the Beginning of the Illness, be of so great efficacy ; and in what Sort of acute Fevers it will answer. Why People that have already struggled with acute Fevers have so great an aversion to Fat,

to Flesh, Eggs, Fish, and on the Contrary do covet Water, sour or tart Things, Summer Fruits, and cold Things? Why Medicines are of no Service to the Patient, unless you have first removed these Loathings and their Occasion? Why this Symptom be often incurable? Why sometimes these Distempers go off with a sudden, unusual and wonderful Appetite succeeding them.

Of Belchings and Winds.

646. Belchings owe their birth to an Elastic Matter, which by the heat, effervescence and fermentation is made able to swell and dilate, which in one moment is retain'd, and in the next having loosen'd or broke its Prison, is push'd out with a sound and impetuous Noise.

647. So that the Air, Salts of an opposite Nature, Summer Fruits, putrifying Humors, and such of the Vegetable Kind as are apt to ferment, supply the matter for Belches and Winds, whereof the Noise and Stench doth differ according to the different Nature of its Producer.

648. Nor will all these occasion any noisy sound, if they have a free passage to exhale at; Whence it appears, that the Contractions of the Sphincters of the Gullet, Stomach, of the superior and inferior Orifice of the Stomach and of the Intestines, do always meet together, and are again loosen'd together; Whence Belches, Winds, Farts, and the Frog-like croakings of the Guts.

649. If these two Causes (of 647, and 648.) do meet and act powerfully and last long, then doth the Elastic Matter being by heat, motion, and

its own proper Strength stirred up to a Dilatation, and imprison'd in a Cavity whose Fibres being by Convulsions contracted, do dilate the closing Membranes, stretch them, makes 'em painful, compresseth and squeezeth the adjacent Parts; whence arise intolerable Pain and Anguish, which cease instantly upon the letting out of the Winds. (See 220. to 227.) and 631. to 634. And if to this is join'd a Fever, there ensue most inexpressible Torments.

650. The Cure of this Evil is effected, 1. By carrying off the Matter (647.) with Diluters; warm dissipating Waters gently Aromatic; such as break the ballance of the Salts to a requisite overplus: Such as correct Putrifaction; and as do subdue or lessen Fermentation. 2. By such as allay Convulsions, soften Acrimonies; Refrain the Motion of the Spirits; whereof the chief are Opium and gentle Antihysterics. 3. By Glysters, Fomentations, hot, loosening, anodyne and gently aromatic outward Applications, and with dry Cupping-glasses upon the Belly without Scari-fying.

651. From these (646. to 651.) Answers are ready to the following Queries otherwise pretty obscure. Which Aliments, Drink, Poisons, and Medicines are flatulent? Why chiefly so, when the Stomach and the large first Bowels are empty? Why they produce 'em when those are wounded? Why when the Abdomen is closely tied up by inward or external Causes? Why hypochondriac, hysteric, convuls'd and cholicky People are much afflicted with Wind?

Of Vomitings in Fevers.

652. Vomiting, which at first is a violent Expulsion and throwing up of the Contents of the Stomach, and afterwards also of the Guts, and lastly of the Bowels emptying themselves into the latter, acknowledgeth for its nearest cause a Convulsion of the muscular Fibres of the Jaws, Gullet, Stomach, Intestines, Diaphragme, and of the abdominal Muscles; And for its remoter Cause, whatever doth stimulate the described Fibres by irritating them, or the Bowels which are easily convuls'd.

653. So that it sometimes happens by the defect of the Stomach which is convuls'd, inflamed, imposthumated, schirrous, and cartilagineous, together with an acute Fever; it is obstinate and of a long Duration, and it may be known when the Causes are such; nor is it cured, but by the Removal of them, of which hereafter.

654. By the defect of the Bowels and of the surrounding Parts being affected in the same manner, and irritated by the distended Stomach full of Aliments or other Matters; in which Case a very stubborn Fit of Vomiting will often invade together with a Fever.

655. By all the Causes of very great Loathings (642.) whence it may be known, be managed, and cured.

656. If it continues a long time, it occasions Wastings, Iliac Pains, Convulsions and the Effects of great and stubborn Loathings (643.)

657. If from the Causes (in 653. 655.); the Cure must be fetch'd from the History of those Diseases.

658. If from the Cause (in 642, 655.); then ought the Remedies (of 644.) to be applied without any loss of Time; chiefly Opiates; and strengthening, drawing outwardly, and dissipating Fomentations incorporated in Lint or Crums of Bread, &c. " The following I have very often
 " experienced to be efficacious: *R. Theriac. An-*
 " *drom. ʒss. Ol. Nuc. Muscat. Laud. Liquid. aa*
 " *gutt. xx. Lanæ Cotoneæ q. s. ut in forma boli*
 " *applicetur ad scrobiculum cordis, superimponen-*
 " *do emplastrum Stomachicum Magistrale.*

659. Hence the reason is plain, why it is so difficult to put a Stop to Vomitings in many acute Fevers; and also the Falshood of that Rule too generally and unwarily embraced by the heedless or ignorant of Art, *That Vomitings are cured by Vomiting*: Why Sudorifics often cure Vomiting, as in the Plague? Why Vomitings cease of their own accord after the critical Separation, as in the Small Pox? Why Bleeding doth often stop them in acute Inflammatory Fevers? Why such, as have had continual Vomiting attending them in the beginning of an acute Fever not of the Inflammatory Kind, have a critical Loosness at the End; which might have been prevented, by giving of a Vomit in the beginning of the Illness? Why it is very bad in acute Diseases to bring up every thing as soon as taken? From these the Hiccough may arise, which however is not incurable.

Of Weakness in Fevers.

660. The hindrance of the Influx and Pressure of the nervous Juice into the Muscles, is follow'd by an extream Weakness.

661. Which hindrance may proceed from the Emptiness of the Vessels, from the Liquid being spent, or its being unable to flow, from the Obstruction of the Canal, or its being press'd and squeez'd by an outward Cause; chiefly about its beginning in the Brain and Cerebellum; and from the Weakness of the Heart.

662. That it is the first Cause, is made evident, from the Symptoms, which are the consequences of large Evacuations, when they have either preceded, or are actually existing; such are the long continuation of the Disease; Losses of Blood whether occasion'd by the Disease it self, or artificial by the hand of the Surgeon; Sweats, a Diabetes, Salivation, Diarrhæas; From the want or weakness of the Aliments, whether not retained, or not well digested, or not duly assumed by the the Lacteals into the Channel of the Blood. From a Paleness, Leanness, little Pulse, the falling of the Veins and Vessels, and from the flagging and shrivelling of the Muscles.

663. That the glutinous Liquid doth or cannot flow, or is inflamed, may be known from the Signs laid down (from 69. to 74.)

664. That the Channels are obstructed by looking back (from 107. to 144.)

665. That the Compression of the Brain and Cerebellum is the Cause of the present Weakness,
is

is known, when at the same time we observe those Functions weakned and damaged, which we certainly know to depend from their being entire; that is, when we see the Patient delirious, dosing, trembling and complaining of a Vertigo and Noise in his Ears, at the same time as we perceive his great Weakness.

666. But we know the same to be occasion'd by an immediate weakness of the Heart, when we perceive the Signs of a deficient Circulation (See 106.)

667. Liquid Aliments, of a like Nature with the Blood, digested by Art, Gelatinous, Soft, from either Animals or Vegetables, Winy, and Aromatics, mixed up according to Art, given often, in small Quantities, with gentle Frictions of the external Parts; all these replenish the most safely and conveniently, chiefly if at the same time care be taken, to let all these be of a contrary Nature to the Disease it self.

668. If the Weakness proceeds from the Liquids being unable to flow, then ought the Remedies of (75.) and (from 132. to 137.) to be applied: For no other Means will do in this particular sort of Weakness.

669. As to that occasion'd by the Obstruction of the Channels, its Cure is described (from 124. to 144.)

670. But that, which proceeds from the Compression of the Cerebrum and Cerebellum, is generally cured by those Means, which being applied to those Parts, do remove whatever by its sticking fast did obstruct (124. to 144.), and are able

able to draw the Shock to other Parts. This is done by moistning the Nostrils, Head, Face, Mouth and Neck, by gentle Fomentations; and by applying Blisters to the Feet. NB. "No able
"Physician in *England* will hesitate one moment
"to put Blisters on to the Neck and even on the
"Head in this Case before us; But in *Holland*,
"and other Countries beyond Sea, they have been
"backwards in attempting this Remedy: And
"Baglivi has wrote a small Treatise about the
"Use and Abuse of Blisters, wherein he accuses
"them very wrong of some ill Effects, which
"they seldom or never do occasion, and which
"ought no ways to come into a competition with
"the many wonderful Benefits that are reap'd
"from their bold and constant Use in all Cepha-
"lic and many other Cases.

671. The Weakness from a weakn'd Heart is seldom remedied, but by very gentle and consequently slow Means. And in this Case, those general Remedies are mostly of use which are set down (from 667. to 671.)

672. From all these (660.) it appears how ill the generality of People judges commonly of the Nature of Cordials, in acute Diseases; applying strong, hot Things promiscuously in all Cases, and even in such where Evacuations wou'd prove greater Cordials, than all the fine Things powr'd down their Throats, whether brew'd at Home or at the Apothecaries: And it is also hence apparent, how very often in Fevers, Weakness is an insuperable Evil.

Of Heat in Fevers.

673. *Heat* in Fevers is known outwardly by the Weather-glass, and the Sense or feeling of the Patient ; But the inward Heat from the Redness in the Urine.

674. It always argueth a greater quantity of Fire in that Part, which it heats the most.

675. Which oweth its Origin to an unusually strong rubbing of the fluid Parts among each other, against the Vessels, and of the Vessels against the Liquids.

676. This violence ariseth from the great Motion of the Parts push'd forth from the Heart, and from the strong resistance of the Vessels against the Heart.

677. The great Motion of the Blood thrust from, and by the Heart is measured by the Thickness of it, and by its quick or slow running through the Vessels.

678. The degree of Thickness is known by inspecting the same when extravasated, from the past Dissipation of the thinnest Parts, and from the hardness of the Pulse.

679. The Quickness of its running is computed from the number of the Beatings of the Heart compared with the greatness of the Pulse Beatings.

680. The greatness of Resistance is known from the bulk of the sluggish Liquors that are to be moved ; And from the small number, narrowness or unmoveableness of the Canals, which are to let the said Liquids pass.

681. That

681. That the Liquids to be moved are too bulky, is known from the Signs of a Plethora (106.), of a Cacochymie, or of a sudden Solution of those Liquids, which just before were stagnating, as it happens in fat People: But this appears most of all to be the Case, when the Veins are much swell'd, and at the same time the Arteries are quick and full.

682. That but a small number of Vessels lets through the Liquids may be concluded from the History of Obstructions (from 107 to 124.) or of Wounds (from 145. to 331.)

683. The narrowness of the Vessels is understood by seeing, feeling, and knowing the dry Constitution of the Patient, whose heat increases greatly upon the least encrease of motion.

684. The unmoveableness of the Channels, which do resist greatly their being dilated, is known by all the Signs of the stiff Fibres, Vessels and Bowels. (See 32. to 34. and 50. to 53.).

685. From so many proximate Causes (674. to 685.) doth depend and arise the febrile Heat; of which again there may be numberless and different more remote Causes.

686. But it may arise from the increase of only one of those Causes, in which case the said increase of heat keeps pace with the increase of its Cause.

687. If again two Causes increase together, then will the increased Heat be as the Product of the Increments of those Causes if multiplied by each other.

688. Which

688. Which same Computation may take place as to the rest.

689. Heat increased doth dissipate the most liquid parts out of our Blood, that is, the Water, Spirits, Salts, and subtilest Oils; it drieth the remaining Mass, thickens it; causes it to run together into an unmoveable and not resolvable Matter: it freeth the Salts and Oils, attenuates and makes 'em sharper, exhales and moves 'em; consequently it wears the smallest Vessels out and breaks 'em; dries the Fibres, makes 'em stiff and shrivell'd; hence produces suddenly many, quick, dangerous and mortal Diseases; which may easily be accounted for, and derived from the first effect of heat mention'd here.

690. And from these may at length well be understood what is requisite to moderate this Heat, and how many various Remedies do hereto belong.

691. If this heat proceeds only from an increased quickness, every thing which lessens that will be its Remedy. The chief are, a Quiet of Mind and Muscles, letting of blood, a gentle and short Compression of the Veins by making Ligatures in the Joints; an inward and outward slow and gentle application or assumption of cold things, and Paregorics used very prudently.

692. If it proceeds from a thickness that will be remedied by the just mentioned, as lessening the quickness; and besides by drinking of Water and Oxymel, and using such as loosen the Vessels.

693. The bulk of the Liquids is soon overcome and put in motion, when from a Plethora,
by

by what is said in the 106th Aph. at the Letter G.: when from a Cacochymie by evacuating slowly and at several times, and by correcting; but the difficulty is very great when that Fat has been dissolved which was stagnating before in fat People; then are of great use watry, and acid Medicines with the mixture of Honey, Yolks of Eggs, Sugars, and withal Evacuations all along, tho' moderate ones.

694. When Obstructions create Heat, its Cure is learn'd from the Cure of Obstructions (125. to 144.) and of the Evils coming upon the loss of some Vessels in Wounds.

695. When from the narrowness of the Vessels, there is occasion to dilate them by such means as relax (54.)

696. By which same means that heat is also cured which proceeds from the too great stiffness of the Fibres.

697. But as often as an Excessive Heat comes from several joynt Causes, as often is it necessary to joyn the several mentioned Remedies (from 690. to 697.) together.

698. From this whole Doctrine of Heat (from 673. to 698.) it may be understood why a very hot Fever is an acute one, quick, and of a putrid kind? and even pestilential when in its highest degree of heat? Why the heat of a Bed, of a close Air, of hot Medicines and Aliments are so prejudicial in those Fevers? Why a Heat about the Heart and the Sides of the Belly is so injurious and of an ill Omen?

699. The

699. The Origin, Nature, and Effects of Dryness may also clearly be known from hence, and its Cure may be directed, which is perform'd by Drinking, Fomenting, Bathing, Glisters and Gargarisms of watry, fourish, loosening Liquids, with some Honey, &c.

Of Light-headedness in Fevers.

700. A *Delirium* is that Production of Ideas which doth not agree with the external Causes, but only is the Effect of the internal disposition of the Brain, together with a Judgment following from those Ideas and a Passion of the Mind, according to which the Body moves it self in its several Parts : And from these increased by degrees, either single or combined, are created several sorts of Deliria.

701. It supposes therefore always a diseased Affection of the medullar Brain, which may arise from any Obstruction whatever ; the hindrance of Influx, of the Transflux and flowing out of nervous Juice through the Substance of the Brain ; from a violent quick Motion ; a Stagnation, and a great many other Causes ; Which to find out, the Physician ought to use all his Sagacity and Application, in order to obtain a Cure.

702. For different Medicines and a different Method must be chosen according to their Variety and Difference : The Chief made use of (the Choice whereof must be made with Judgment) are, Bathing of the Feet ; Blisters applied to them and the hollow of the Leg under the Knee ; Frictions of those Parts ; Diluting Glisters given oftentimes ;

tentimes ; a thin Diet, a quieting, diluting Drink able to remove, or to help to remove Obstructions ; Applications to the very head of emollient, light and anodyne Medicines ; Bleeding in the Foot ; An opening of the Hæmorroidal Veins ; Procuring the Menfes to flow, or the Cleansings in Women brought to Bed.

Of Dosings in Fevers.

703. A *Coma* is a continual propensity to sleep in Fevers, sometimes with a real Sleep, and often without it : It always supposes that State in the Brain, from whence the free exercise of the Senses and Animal Motions is hindred ; which may arise from a Defect of the nervous Juice derived to the Brain, or from its Circulation through the Brain, or from the Separation of Animal Spirits from the Blood into the Nerves being obstructed ; or from those Spirits being denied their free Passage to and fro through the Nerves.

704. So that several, different and often contrary Causes, may produce this Symptom in Fevers ; such as all violent and great Evacuations or Repletions ; all the too great thickenings of the Blood, whether by glutinous Fat, or inflammatory Matters and Causes ; all that will compress the Brain it self, of whatever Nature it be ; which same Causes will produce the same Effects, if they act immediately upon the Nerves themselves.

705. Whence it appears again, That the Physician ought very exactly to inquire into and find out the particular Cause of this Effect, before he

determines with himself what to prescribe or what to do. For sometimes ought the very contrary things to be done, of what has succeeded in seemingly the like Case; and often will a Coma after a long and obstinate Continuance, after all Means have been try'd in vain, go off at last of it self, when the Coction of the febrile Matter is perfected.

706. But in general, those things are proper here that were said to be useful in Deliriums (702.) chiefly Fomentations to the Head and Neck.

707. But if there be Signs of a great Inflammation, it ought to be cured as the chief Disease directs; of which hereafter.

Of the obstinate Wakefulness in Fevers.

708. The opposite Evil to the foregoing is the constant and obstinate Wakefulness, whence its Nature may easily be understood; and its Cause is generally the first beginning of the slightest Inflammation in the Brain, which if encreased generally turns into a Coma, its opposite.

709. This is cured by procuring Rest to the Muscles, quieting the Mind; by removing all Objects from the Sight and other Senses; by cooling the Patient moderately; a moist Air, a soft and emollient Diet; by soft whispering or making a constant but grateful Noise imitating the sound of small Bells; by mealy Medicines that contain cooling Oils, are moistning and softning; by making the Patient smell to Plants or Flowers that have a narcotic Faculty; by the use of Anodynes,
Parego-

Paregorics, and Opiates try'd by degrees; Doing first all things which are able to cure Inflammations and to prevent its Increase.

Of Convulsions in Fevers.

710. Convulsions heretofore described (from 230. to 239.) in this Case do always proceed from a defect of the Brain, which is either affected by some Matters, being convey'd thither through the Nerves, (627. 631. to 633. 642. 648, 649. 652. to 654.) and thereby twitch'd; or they proceed from the unruly arrival, transflux and issuing forth of the Animal Spirits, which may arise from every one of the Causes, which is able to create a Delirium, a Coma, and obstinate Wakefulness; which shews the great Variety of them, and the Necessity of very different Cures.

711. If the same continue long, because of the mutual Intercourse of the Nerves, the Evil soon spreads to the whole System of the Nerves, whence innumerable Ills.

712. If Convulsions follow the Signs of an Inflammation of the Brain, they are almost Mortal. The worst Sort is, when the Patient first makes thick Urine, then watry and transparent, which is follow'd by a Convulsion: If Convulsions come upon great Evacuations in Fevers, they also prove mostly Mortal: and also such as happen in a perpetual Delirium.

713. In order for a Cure, The Physician ought first to enquire into the singular Cause, (710.) and the place chiefly affected, whence those Convulsions have their birth; and then he ought

forthwith to apply such Medicines, which be able to soften the acrimonious, to resolve the impacted Matter, and to loosen the contracted Parts. So that these Convulsions are generally cured by Diluting, Relaxing, Revulsions, and softning both the Fluids and the Solids: For it wou'd be a folly to rely here on the Medicines which by their pompous titles of *Antispastics* and *Antihysterics* promise a Specific Cure.

714. But if it appears that the Head be chiefly affected, then the Cure is to be directed as in (706.)

Of Sweats in Fevers.

715. Sweats in the beginning of an acute Fever, whereof the Cause is more than commonly stubborn, owns for their Cause a loose Weakness of the extream capillary Vessels, a violent Circulation of the Blood, and an easie Separation of the thin watry part of the Blood from its other parts.

716. If they continue, they deprive the Blood of its diluting Liquor, thicken the Remainder, and occasion mortal Obstructions, because the Blood afterwards will hardly admit of being either Diluted or Resolved; Whence may be produced almost all the several Kinds of acute Diseases.

717. They ought therefore always to be stopp'd and broke off, unless there be much reason to conclude, that the morbidick Matter is so thin, as to be carried off with the very first Sweating.

“ NB. Against this Rule do err almost all pre-
 “ tenders to Physick, and People who of their
 “ own

“ own accord do take a Sweat in all beginnings
 “ of great Colds and Fevers ; which not only
 “ kills Abundance, but renders the Distempers
 “ hardly conquerable by the ablest Physicians.

718. Sweats are broke off by bidding the Patient to get out of Bed ; by a Sitting posture ; lessening the Cloaths ; letting in a cool Air ; abstaining from hot or heating Liquors ; drinking a good deal of soft, mild and coldish Liquor, so as to supply quickly and replenish the Vessels ; and by bridling the too quick circulation of the Blood, and Humors, by the Means assign'd from (102. to 106.)

Of a Looseness in Fevers.

719. The Matters, which occasion, and are voided in a Diarrhæa, are a Mucus, Lympha, Glew, Pus, watry Blood, and Blood it self, all coming from the Nostrils, Mouth, Jaws, Gullet, Stomach, Liver, Gall-bladder, Pancreas, the Guts themselves, and the Mesentery ; The Causes of their working themselves off in the Form of this Disease are such a powerful force as carry them violently into the Guts, while the contracting force of the said Guts is much weakned ; or Impediments in the absorbing Vessels of the Guts, such as the Lacteals, hindring the Inlets of some of those Matters through them into the Channel of the Blood.

720. So that it appears, that a Looseness in Fevers is manifold as to its Matter, Cause, Effects and Consequences ; and consequently is often incurable altogether ; That the Colliquative Looseness

ness is not very common, but when come it hardly ever admits of a Cure.

721. If it continues long, it disposes the Bowels of the Lower Belly more and more to this Disease, it weakens, excoriates, inflames them; and it drains and dries the other Bowels and Vessels. Whence a want of Nourishment, Leanness, Weakness, Bloody-Flux, a thickning of the Fluids through the whole habit of the Body, a Laxeness of the Solids, a Loss of the Fluids, a pituitous Bloating all over, a Dropsie and a Consumption.

722. The Cure is perform'd by the softning of the irritating Arimony; by the Expelling of the same with Vomits, Purges, and Glysters; By corroborating the lax and loose Vessels and Fibres of the Guts; By appeasing their violent Motions with Narcotics; Diverting the peccant sharp Humor another way, either towards the Urinary Vessels, or to the Pores of the whole Body; Carrying off gently the Morbific Matter (after having first corrected its first Source, the Stomach or Duodenum) " Which is wonderfully effected by small but repeated Doses of " Rhubarb.

Of Spots or Pustules in Fevers.

723. Inflammatory Pustules have generally for their matter something, which cannot pass through the least Vessels of the Skin, but is forced to stop there; And for their Cause they acknowledge the circulating, secretory and excretory Power in Life; so that they are manifold according to the difference

rence of those Causes ; so that several Fevers take their Names from thence, being called, Erysipelatous, Scarlet, Red, Petechial and Purple, or morbillous and variolous from the Measles and Small Pox.

724. Of the three Last, it is usual to treat separately ; But of the three First, the Diagnostic and Prognostic are easily made.

725. The Cure is not very difficult, they seldom requiring any thing but that the Matter be kept moveable and moving, by giving great Quantities of thin Liquors, and that the power of Life be constantly kept in a just Ballance ; neither too high, so as to raise too much Fever ; nor too low, so as to depress the Spirits, and rendering them unable to drive out or resolve the Matter : By which Method the said Pustules or Spots soon vanish together with the Skin, which peels off and makes room for a new one grown underneath.

726. The same Symptoms happen here as in other Fevers, and require the same Cure, provided the Physician has still a particular regard to the main Disease.

727. Hence it appears, what we ought to think about the variety of acute Fevers ; For all such as do carry the Febrile motion, when once raised, to its very end at one Shock, Them we call *Continual Fevers* : Such as now and then do relent and renew their force, without ceasing entirely, Them we call *Continual Remitting Fevers* ; and such as do so far relent as to leave the Patient without any Fever at all between the Fits or Paroxysms, Them we call *Intermitting Fevers*.

Of Continual Fevers.

728. The least Compound of Continual Fevers is the Ephemera, *of one Day*; which doth begin, increase, arrive at its highth, and decline within the space of four and twenty hours. For its Causes it owns only a too violent motion occasioned by some Error committed in the Nonnaturals, and has scarce yet any Matter. It is known from the flightness of its Cause, a clean well conditioned Habit of Body; light and gentle Symptoms, a quick Crisis; and from the Pulse being entirely restored to its natural State soon after the Fever is gone off. The Cure is easily perform'd, by Abstinence, Rest, and Diluting.

729. If the said Fever lasts several days, it is called a *Continual, not Rotten Fever*: Its Causes, Signs, and Cure are the same, and chiefly require a large bleeding and cooling Diet and Medicines.

Of a Continual Putrid Fever.

730. The Greeks have given the Name of *Συνοχὴ* to that sort of Fevers which are continual without any distinct Paroxysms or Remissions; and is distinguish'd from the preceding *Συνοχὴ* by its being *Putrid*: It proceeds from Causes exceeding slight Inflammations, an Obstruction of the Bowels, an Obstipation of the Pores of the Skin, a Stoppage of almost all the Capillary Vessels, and to a very sharp Acrimony.

731. Its known by a Heat affecting even the feeling Finger or Hand of the Physician, a Feverish Pulse not only but both unequal and inordinate;
thick,

thick, red, turbid Urine, and crude without any Sediment; from a hot and sanguine Constitution, Age, and Complexion.

732. This Fever is divided into three Sorts; the one is called *Homotonos*, which keeps up in one degree of strength and violence; another *E-pacmaſtica* or *Anabatica*, which ſtill increaſes; and the Third *Paracmaſtica*, which continually decreaſes and grows milder.

733. The firſt ſort is commonly curable; The ſecond is full of danger; The third the leaſt dangerous.

734. This Diſtemper is deemed the more dangerous and mortal as the *Pulſe* is weaker, quicker, more unequal in ſtrength, more irregular as to time, and more intermitting in its ſtrokes; as *Breathing* is more difficult, frequent, ſhort, with a great motion of the Noſtrils, the more painful about the Vitals, and the more unruly in its time; as *Wearineſs* and *Weakneſs* are greater, the *Toffing* of the Body more frequent; as the Patient chooſes more to lye flat upon his Back with his Limbs fully extended; as his *Reaſon* and *Paſſion* are more diſturb'd, his *Appetite* more proſtrate, his *Digeſtion* more difficult; as the *Urine* is higher colour'd, thicker, muddier with the leaſt Sediment; or as the ſame is thinner, more watry, more ſparing and kept difficultly; as the Patient *trembles* and ſhakes more, chiefly in his Hands and Lips, is ſhy of being felt, doth play with his Hands and Fingers, and as it were catches at Flies, or ſome things he fancies to ſee upon the Bedclothes and about him; and as his
Eyes

Of Continual Fevers.

728. The least Compound of Continual Fevers is the Ephemera, of one Day; which doth begin, increase, arrive at its highth, and decline within the space of four and twenty hours. For its Causes it owns only a too violent motion occasioned by some Error committed in the Nonnaturals, and has scarce yet any Matter. It is known from the slightness of its Cause, a clean well conditioned Habit of Body; light and gentle Symptoms, a quick Crisis; and from the Pulse being entirely restored to its natural State soon after the Fever is gone off. The Cure is easily perform'd, by Abstinence, Rest, and Diluting.

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Of a Continual Putrid Fever.

730. The Greeks have given the Name of *Συνολα* to that sort of Fevers which are continual without any distinct Paroxysms or Remissions; and is distinguish'd from the preceding *Συνολα* by its being *Putrid*: It proceeds from Causes exceeding slight Inflammations, an Obstruction of the Bowels, an Obstipation of the Pores of the Skin, a Stoppage of almost all the Capillary Vessels, and to a very sharp Acrimony.

731. Its known by a Heat affecting even the feeling Finger or Hand of the Physician, a Feverish Pulse not only but both unequal and inordinate;
thick,

thick, red, turbid Urine, and crude without any Sediment; from a hot and sanguine Constitution, Age, and Complexion.

732. This Fever is divided into three Sorts; the one is called *Homotonos*, which keeps up in one degree of strength and violence; another *E-pacmastica* or *Anabatica*, which still increases; and the Third *Paracmastica*, which continually decreases and grows milder.

733. The first sort is commonly curable; The second is full of danger; The third the least dangerous.

734. This Distemper is deemed the more dangerous and mortal as the *Pulse* is weaker, quicker, more unequal in strength, more irregular as to time, and more intermitting in its strokes; as *Breathing* is more difficult, frequent, short, with a great motion of the Nostrils, the more painful about the Vitals, and the more unruly in its time; as *Weariness* and *Weakness* are greater, the *Tossing* of the Body more frequent; as the Patient chooses more to lye flat upon his Back with his Limbs fully extended; as his *Reason* and *Passion* are more disturb'd, his *Appetite* more prostrate, his *Digestion* more difficult; as the *Urine* is higher colour'd, thicker, muddier with the least Sediment; or as the same is thinner, more watry, more sparing and kept difficultly; as the Patient *trembles* and shakes more, chiefly in his Hands and Lips, is shy of being felt, doth play with his Hands and Fingers, and as it were catches at Flies, or some things he fancies to see upon the Bedclothes and about him; and as his
Eyes

Eyes look more sorrowfull and moist with involuntary Tears.

735. But when the Patient labours much in his sleep, and wakes worse after it, when either purple or livid Spots do deform the body, the Sides of the Abdomen are stiff and blown up, then is he very near dying.

736. The Cure heretofore assign'd according to the various Indications; Violence of the Symptoms, the Condition of the Patient, and the State of the Disease itself prudently managed and varied require here nothing peculiar.

737. These call'd by the Antients πυροποι, the Modern Physicians have call'd *Continentes*, because there is no remission of heat in them, &c. See (727, 728.)

Of Ardent Fevers.

738. Among which the *Kavos*, or the burning hot Fever deserves to be separately treated of, because of its frequency, danger, and difficulty to cure.

739. Its chief Symptoms are, a most scorching Heat, unequal in different places, most burning about the Vitals (at the Extremities often more moderate, and even sometimes a Coldness there.) and firing almost the very Air breathed out; a dryness all over the Skin, the Nostrils, Mouth, and Tongue; a thick, labouring, and quick Breath; a dry, yellow, black, burnt and rough Tongue; an unquenchable Thirst, sometimes going off suddenly without any other good Sign; an aversion to all sort of Aliments, a Nauseating, Vomiting,

Vomiting, Anguish, Uneasiness, a great Weariness; A little Cough, a Hollow Voice, a Delirium, Phrensie, obstinate Wakefulness, Dosing, Convulsions; and on the odd Days a renewing and increase of the Fever.

740. Its Causes are, Too hard Labour, Overwaking, The heat of the Sun long sustained and received on the Head chiefly; Too long bearing of Thirst; The use of heating, fermented Liquors and of sharp Aromatics; The too much indulging to Venery, an excessive Fatigue chiefly in the Summer, &c.

741. Its Course is as follows; It very often kills on the Third and Fourth Day, it seldom gets over the Seventh, if it be a perfect Causus; It often goes off with an Hæmorrhagie; (which, if but small on the Third and Fourth Day, is mortal) This may be foretold, from the Patient's complaining of a Pain in the Neck, Heaviness at the Temples, dark Dimness, a working and labouring of the Heart and Lungs without any sense of Pain, involuntary Tears without any other mortal Sign, a redness of the Face, an itching of the Nostrils; and is the most advantageous if it happens on a Critical day: This Fever will go off also on a Critical day with a Vomiting, Looseness, Sweating, much Urine, thick Spittle; If the Fit reneweth on an even Day, it's very bad if before the sixth Day; In this Case black, spare and thin Urine, is mortal; Spitting of Blood, mortal; Pissing of Blood, mortal; Defective and troublesome Swallowing, bad; Coldness of the Extremities, very bad; The Face being red and Sweating,

Sweating, bad; Swelling behind the Ears not ripening, mortal; The Belly too Loose, mortal; When the Patient begins to tremble he grows delirious, and then dieth; This Fever often changeth into an Inflammation of the Lungs with a Delirium; That is the worst, which begins with very great Torments in the Belly; *Goes off Critically with a cold shaking.*

742. Which being understood, it will not be very difficult to know this Disease, when present; nor will there be any dispute about its Proximate and the Cause next to that; For it proceeds from the Blood being depriv'd of its softest and most liquid Part, by means of an Inflammation raised all over the Body while the Patient was in a full strength and health of Body: Nor is it difficult to make pretty sure Prognostics from thence.

743. For the Cure of this Disease, it is necessary to procure, a pure, cool Air, often renew'd by opening of the Windows, by cooling Plants fresh water'd, &c. The Bedclothes ought to be thin and light, that the Patient may neither complain of their heat nor weight; He ought to be set up often; to drink plentifully of watry, soft, gentle, somewhat acid Liquors rather hot than cold, though he shou'd covet the contrary, as most times happens; The Aliments be Light, Meally, of Barley, Gruel, and tart Fruits, such as boyl'd or roasted Pippins, and other Apples or Prunes, &c. Let him be let blood *in the beginning* of the Illness, if there be the Signs of a Plethora or of a particular Inflammation, the Heat be intolerable, the

the Sweats too great, a Revulsion be necessary, the Symptoms very urgent, and hardly to be mastered by any other Means; In these Cases bleeding is of an absolute necessity: According to the violence and degree of Heat, the dryness of the Guts and its consequent Costiveness, the Necessity and the Nature of a Revulsion indicated, Gentle Diluent, Loosening, Antiphlogistic, and Cooling Glysters are to be repeatedly given: The whole Body ought to be moist'ned by receiving into the Nostrils the Steams of warm Water and the Air thereby temper'd, washing the Mouth, and the Throat; bathing the Hands and Feet in lukewarm Water; fomenting with warm wet Sponges those Parts whereof the many Vessels are the most accessible and outward; by exhibiting Medicines of the watry Kind, as are soft, nitrated, of a pleasant Taste, as gently loosen the Belly, promote Urine and supply the same with Matter, as by their Bulk and Quantity will be a Vehicle to cause easie and relieving Sweats, but not by their Acrimony or Stimulus; By all such in a word as do relax the contracted Fibres, and dissolve, dilute, and temperate the sharp Acrimony and the thickness of the Liquids. " See here a
 " Drink recommended by the Author and truly
 " commendable in this Case, which I copy'd
 " from his own Mouth at *Leyden*. B. *Hord*.
 " *Mund. ad crepatur. coct. ʒiv. Tamarind. ʒij.*
 " *Coque ex aquæ Putealis Congio j. Decoctionis*
 " *ʒiv. adde Acetosell. Citri recent. express. aa ʒij.*
 " *Syrup. diamor. & Ribesiorum aa ʒij. Nitri ʒij.*
 " M.

“ *M. sumat pro Lubitu.* See here one of the
 “ *Glysters* he chiefly recommends in this Case.
 “ *R. Ol. rosac. Amygdal. dulc. aa ʒj. Mell. rosac.*
 “ *ʒij. Exacte permistis affunde, Seri Lactis ʒx.*
 “ *Nitri ʒj. M.*

744. To which whoever doth join what has been laid down for general Rules in the Cure of acute Fevers and their Symptoms, and what is to follow, when we shall treat of acute Fevers which invade and tend to the Destruction of some particular Bowel, he shall clearly apprehend all that is Necessary and Useful in the Cure of any ardent Fever.

745. Nay, the singular remaining acute Fevers are from these sufficiently understood, or are referable to some of the particular Symptoms, or are the Effects of some other acute Disease.

Of Intermitting Fevers.

746. The Definition of an Intermitting Fever has been laid down already (in 727. 737.) Its Diagnostic is self-evident; its Distinction in different Classes easie, as depending altogether on the different time of its Invading.

747. It ought to be observed however, that this Fever is either *Vernal*, lasting from the beginning of the Spring in the Month of *February* to *August*; or *Autumnal*, which rages from *August* to *February*. Which Distinction is necessary to be made because of their various manners of Invasion, Symptoms, Endings, Durations and Method of Cure; so that even the one drives t'other away.

748. And

748. And they even in the beginning of the Autumn do exactly imitate the Nature of continual Fevers in their long and increasing Paroxysms, though their Nature differ vastly, and require a quite different Cure.

749. They begin with a yawning and stretching, a weariness, weakness, coldness, shaking, shivering, trembling, a Paleness of the Fingers and other Extremities, a very difficult Breathing, an anguish, nauseating, vomiting, a quick, weak and small Pulse. As these Symptoms are greater and more numerous at once, so much the worse is the Fever, so much the greater the subsequent Heat, and all other Symptoms worse: And this is the first Degree of this Fever, answering to the Increase of the continual Fevers, and much more dangerous than the other States, "for it is known from Observations, and it is consistent with Reason, that almost all who dye of this sort of Fevers do dye in the cold Fit. The Urine made then is generally Crude and Thin.

750. This first State is soon overtaken by the next, beginning with a Heat, redness, strong, great and freer Breathing; a less Anguish, a greater, and stronger Pulse; a great Thirst, and a great Pain in the Limbs and Head, the Urine most times red: And this State answers to the height of continual Fevers.

751. Then generally at last succeeds a great Sweating, and a remission of almost all the Symptoms; The Urine is thick, its Sediment like unto Brick-dust: The Patient falls into a Sleep or Slumber; the Fever goes off quite, and he finds himself weary and much weaken'd.

752. They often change into continual Fevers and very dangerous ones, which is mostly owing to the giving of too hot Things, by which a strong Motion is occasion'd, not easily subdued again.

753. An Intermitting Fever in the running over its three Stages, doth force the Fibres of the Vessels and Bowels very much, by stagnating, obstructing, coagulating, driving, resolving, and attenuating; whence the Vessels are weaken'd, the Liquids become diseased, and chiefly acquire that sort of Defect, which those Parts have, that have been insufficiently assimilated to, and mixed with the well concocted Blood; from which at the same time arises an Acrimony; So that from all these there is a great disposition to profuse Sweats that very much weaken, the very viscous parts of the Blood being apt to pass through the Pores; Then is the Urine wondrous thick, turbid, like unto Mares Piss, and Fat; such is the Spittle; hence is the weak, dissolved, scarce coherent Blood deprived of its best Part, the remainder being rough and thick also: So that from this laxeness of the Vessels, and the thickness and sharpness of the Liquids, these Fevers do generally throw the poor Patients (when they continue long) into Chronical Diseases; such as the Scurvy, Dropsie, Jaundice, white Bloatings, Schirrous Tumors of the Lower Belly, and all the Disorders flowing from them.

754. But otherwise, if they are not Malignant, they dispose the Body to a long Life, and cleanse it of old and rank Diseases.

755. So

755. So that after a due examen of the whole History of Intermitting Fevers (from 746. to 755.) it must be concluded, that their proximate Cause is, A viscosity of the arterial Liquid, upon which succeeds any one of the Causes of the too strong and quick Contraction of the Heart, and a Resolution of what had stagnated.

756. And therefore, as the Order set down in 749, 750, 751. always takes place in Intermitting Fevers, it seemeth plain, That whosoever can overcome the first State (749.) and the first Cause (755.) That he can also overcome and prevent the whole Fit of this Fever.

757. And whereas innumerable Causes, and they pretty slight, may produce the first State (749.) of a perfectly Intermitting Fever (727. 737.) and its proximate Cause (755.) And that several of 'em may be bred in the very Body, grow there, and in some time become ripe, as doth happen in all Liquors either produced or separated in the Body; It is more difficult to distinguish the really true one, bred out of so many possible ones, than to fancy a possible one, from which, being laid down as granted, Reasons be given of the periodical Paroxysms agreeing with the Rules of our Animal oeconomy; which will be plain to any one who makes the tryal.

758. The Cure therefore requireth the Use and Application of opening Salts, of Alcalies, Aromatics, Minerals, Diluents, soft oily Medicines, of Heat, Motion, Fomentation, and Frictions, when the Fit is either entirely off, or in the first State.

759. Nor is a Purge or a Vomit, to carry off the Filth out of the Stomach and Guts, less useful, being given at a sufficient distance before the expected Fit, so as to have finish'd its Operation. That this ought to be done, the Physician judges from the Patient's way of Living, Distempers, and Symptoms as have preceeded, from his nauseating, vomiting, belching; swelling, smelling and foulness of the Tongue, Throat and Palate; from the loss of Appetite, bitter taste of the Mouth, and a dim Giddiness; Giving after the Operation is over, an Opiate to the Patient to quiet the Motion before the coming on of the Fit.

760. Which Medicines are even Commendable as they do stimulate and thereby may conquer the first Cause, that is the Viscosity of the Blood and Humors: " For it is commonly obvious that
" repeated Vomits to such as cou'd bear 'em has
" frequently cured Intermitting Fevers, when all
" other Remedies had proved ineffectual; and
" chiefly in the Northern Climates.

761. But sometimes they do harm, as they weaken, force out the thinnest Liquids, disturb Digestions, which above all things are necessary to be promoted here; and so they prolong the Disease, or even occasion Death. The cold Fit and the Fever are often successfully removed by a Sweat. For which the Patient is prepared some Hours before the certain time of the approaching Fit, with some Liquor, that is opening, diluting, gently Narcotic, and given him in great Quantities; after which about one Hour before the Fit the sweating Medicine is given him, and its Operation

is encouraged and continued for about two Hours after the time of the Invasion of the Fit. " The
" laying on of Bottles with hot Water or hot
" Bricks in Flannel to the Feet and in the Bed
" next the Patient, doth promote Sweating wonderfully, together with the drinking of large
" Draughts of Sage or green Tea, &c.

762. So that letting of Blood is in it self here very prejudicial, though it has done Service now and then by chance; as also a thin and regular Diet.

763. When the Fever is in its second State (750.) Then give the Patient warm Water, with some acid, opening and nitrous Mixture, or the Juices of the several Sorts of Succhoree, and such like kind opening Vegetables; Let him lie quiet, and keep him in a moderate Warmth.

764. When the Fit goes off with the critical Sweats, as in (751.) then are useful, Ptyanes with a little Wine, Flesh-broths, temperate Decoctions of some Plants and Roots, to supply the Blood with Matter for Sweats and Urine; so that they ought not to be forced with any additional heat of Medicines nor Cloaths, but to be promoted kindly, with the pouring in of Quantities of kind Liquors, and they continu'd long.

765. We must besides help the urgent Symptoms according to the Rules laid down in acute Diseases, (from 617. to 726.)

766. When the Fever is entirely suppressed, then ought the Patient to be set up again with a nourishing Diet of an easie Digestion, and strengthening Medicines, and when his Strength is pret-

ty well return'd, then ought he to be purged a few times. *NB.* " Here we have seen the Method
 " of curing Intermitting Fevers before and with-
 " out the Use of the Jesuits Bark, which is yet
 " pretty much follow'd in *Holland*, and other
 " Places, where the same is neither so common,
 " nor its Vertues so celebrated as here in *Eng-*
 " *land*, *France* and *Italy*, partly through the Ig-
 " norance of the People, or the Shiness of the
 " Physicians.

767. But if an Autumnal Ague be violent; the Body be already weaken'd by it; the Distemper has been already of some standing, and there be no Signs of any internal Inflammation, nor of any Collection of Matter, nor of any Obstructions in any of the Bowels; Then ought the Physician immediately to have recourse to the Peruvian Bark, which according to the Fancy of the Patient, he may give in Poudre, Infusion, Decoction, extract or boyl'd up into a Syrup; joining proper Specifics and Antidotes according to the different Symptoms, or its way of operating; " for some People
 " it will Purge violently, and others it will Bind; it ought to be given between the Paroxysms when the Fever is entirely off, and then at convenient Distances, in a convenient Dose, taking care to prescribe a good regimen at the same time. *NB.* " There is scarce a Physician of any Practice
 " now in *England*, who has not given the Bark
 " in *Remitting Fevers*, but surely none who has
 " not measured his Distances between each Dose
 " by the time between the Paroxysms; For in a
 " *Quartan* it will be sufficient to give a Dose
 " about

“ about each sixth or fourth Hour ; In a *Tertian*
 “ every third Hour ; but in a *Quotidian* every
 “ second Hour, and even during the Fit, with-
 “ out any manner of Danger.

768. Nor will outward Applications to the Stomach be useless, nor Anointings of the Back-bone ; nor the Drinking of adstringent Decoctions.

769. For to cure each particular sort of Intermitting Fevers, let it be observ'd, 1. That such as are truly intermitting go off the sooner, as the Fits come on quicker, and so on the contrary. 2. That they also come so much the nearer to the Nature of continual Fevers, and are easily changed into them. 3. That perhaps their Cause is much more moveable, and greater in quantity. 4. Which is the reason, why Spring Agues go off of themselves, as soon as the Summer Heat advances. 5. And also why the Autumnal increase as the Winter and Cold Weather draws near. 6. Hence it appears, which of these Fevers require Medicines, and of what Sort.

Of acute Diseases with a Fever.

770. Now come on the acute Diseases, which being accompanied with an acute Fever, yet do induce a singular Inflammation to this or t'other Organ, from whose Function depraved, the Name is given to the whole Disease. Such are the Phrensie, Coma, Carus, Quinsie, Peripneumony, Spitting of Blood, Pleurisie, the Inflammation of the Breasts, of the Diaphragm, Stomach, Liver, Spleen, Mesentery, Guts ; (The Dysentery, Iliack Passion, Twisting of the Guts, Tenesmus, Piles, and

billous Cholicks.) Kidneys, Bladder, Ureters, Womb, of the Joints as in Rhumatisms, and of the Outside and Surface of the Body, as in the Measles and Small Pox.

Of the Phrensie.

771. If there ariseth a perpetual Delirium, with a fierceness in Looks and Actions with a continual acute Fever, from the Brain's being originally affected, that Disease is call'd a *Phrensie*.

If from any other disorder transferr'd from other Parts to the Brain, in a Fever, Inflammation, &c. That is call'd a Symptomack Phrensie, *Aguecourn*, Senselessnes.

772. The true Phrensie is preceeded by a Heat, and violent inward Pain of the Head of the Inflammatory kind; by too great a quantity of Blood; an Inflammatory disposition; a redness of the Eyes, and Face; disorder'd and turbulent Sleeps, a slight disturbance of the Senses; Youth; the Use of hot fermented Liquors; lying with the Head bare to the hot Rays of the Sun; Waking, Anger, Sorrow, stern or rough Temper; sudden Forgetfulness; a driness of the whole, chiefly of the Brain, and by a gathering of the nap of the Bedcloaths. But the second Sort of Phrensie is preceeded by almost every acute Disease with a Fever; A pain of the Side which is not Pleuritic with a slight disturbance of the Mind; An Inflammation of the Pleura, Lungs, Diaphragm, which last Sort is the worst: This sort of Phrensie may be foreseen from the blackness of the Tongue, Costiveness, Suppression of Urine, white

white Stools (which last doth always end in Death) pale, thin Urine without any colour; from the Patient's not being sensible of Thirst; (when from the Nature of the Fever and Inflammation he ought) his looking and acting wildly and roughly, as in a degree of Madness, and contrary to his Temper, his looking very Red; his Urine having a black Cloud; his being unable to Sleep; All which are Signs of an approaching Inflammation in the Head.

773. When both (772.) are present they are attended with the following Symptoms. 1. The Notions about external and sensible Objects are depraved; (they think to see, to hear, to feel, &c. things quite different and contrary to those they do) and also the internal Senses (as Memory, Imagination, &c.) and their Reason and Passions are quite unhinged. 2. They grow wilder, unruly and even beastly (so as to do any ugly or ill-natur'd Trick to the unwary and helping By-stander, till they are forced to tie 'em down, &c.) they are restless, or have often very turbulent Sleeps. 3. Their Pulse is hard, they breathe seldom, but make it up by the length of their Breathing. 4. Their Face is generally very red, staring, and frightful to behold; their Eyes look wild and are very protuberant; and their Nostrils drop frequently.

774. The Prognostic of this Disease is laid down in the following Rules.

A genuine Phrensie kills on the 3d, 4th, and 7th Day, and seldom outlasts that.

If the same be pretty fierce, it often changes into Madness.

If this last increases a little, it becomes quite savage and ungovernable.

It often terminates into a Lethargy, a Coma, or a Catoche.

The Vomiting of rusty Matters upon account of an Inflammation of the Brain; a frequent and unbecoming spitting upon the By-standers; Tremblings; Excrements and Urine being either intercepted, or white; the Urine Crude; Convulsions; a hunting for Flies or Napes, that seem to be flying before them; a gnashing and grinding of the Teeth; insensibility of Thirst, which is commonly the forebode of Convulsions; a continual change of Symptoms, the subsiding of a swelled Ulcer; All these are most times the Presages of the highest danger, and of Death.

That which either succeeds a Peripneumony, or comes from the Inflammations leaving the Lungs to invade the Brain, is Mortal: That, which comes from and in the Small Pox, is very bad; That, which comes from the Iliac Passion, is Mortal also.

An Inflammation, fixed for some time in the Jaws and there producing a Roughness, mounting up in the Head creates a mortal Phrensie; and those have great Heart-beatings and Pulsations in the Neck outwardly appearing, and they all along work and toss with great Labour and Anguish.

That Sort where the Patient is constantly talking, and taken up with his Affairs and the Necessaries of Life, is one of the worst.

775. Such as have died of Phrenesies, and were open'd after their decease, had their Meninges inflamed; a Gangrene, Imposthume, and a Sphacel of the Brain, or some very sharp corroding ichorous Matters.

776. From whence we may draw the nearest Cause of the true Phrensie to be a true Inflammation laying hold chiefly of the *Pia* and *Dura Mater*: and that of the Symptomack to be a like Inflammation arising from a removal of the Inflammatory Matter from other parts into these Meninges.

777. Whatever can occasion these may be called the next Cause.

778. And even from hence must be fetch'd the true Diagnostics to discern these two Sorts of Phrenesies.

779. To obtain a Cure we ought chiefly to attend what follows; If in Phrenetick People the Veins do swell in the Leggs, or the Piles do flow, it is advantageous to 'em.

A Looseness in a moderate degree is of service.

A Pain of the Breast, Feet, or even a violent Fit of Coughing seising them doth put an end to this Disease.

As likewise a large Hemorrhagie.

780. A genuine Phrensie doth require the most powerful Remedies without any delay, which are able to remove the Inflammation seised on the Arteries of the Brain.

781. Which are chiefly to be taken from the general Cure of all Inflammations, observing these following cautionary Rules. Blood must be left

to

to a large quantity out of the large Orifice of one or more Veins at once in the Foot, Throat, and Forehead. Great quantities of cooling Decoctions ought to be given with a large proportion of Nitre. Then give cooling Purges, and at the time of their working great Draughts of diluting, nitrous Drink. Glysters of the like kind, with some lenitive Electuary or Honey, or any such Opener. The Anus must be fomented with the Application of Sponges, the Piles be rubb'd with Figg Leaves, &c. or to be emptied with Leeches. His Mouth must be cooled and wash'd often with soft Gargles: the Nostrils, Eyes, and Ears to be fomented; the Head to be shaved. Having done all these, if the Illness doth not abate, give Opiates; bathe the Feet; apply Blysters, Cupping-Glasses to the inferiour parts. The Body ought to be moderately cooled and set upright. NB. "If Blysters are good at any time 'tis in the beginning, "and then apply 'em boldly to the Neck, and even upon the very Head, as it is the Practice of "the most able Physicians in *England*.

782. But if the Phrensie has been occasion'd by a preexistent Inflammatory Distemper in some other part, it ought chiefly to be minded, whether the nature of that Illness will bear the Applications of (781): Which if not, then ought it to be cured according to the Method peculiar to that, always adding the Remedies that divert from the Head, and are externally applied.

Of the Quinsie.

783. When the faculty of Swallowing and Breathing, is very much hindred, or very painful, or both these together; which proceeds from some Morbific Cause acting upon the Parts performing both these Functions, seated above the Lungs and the Stomach, it's called a *Quinsie*.

784. Whereof two Sorts are observ'd; the first without any Sign of an external or internal Tumor; But t'other always with some Swelling in some part of the foremention'd Organs.

785. The first happens at the latter end of long continued Diseases, chiefly after very large and often repeated Evacuations; its Companions are a paleness of the Jaws, their driness, together with a thinness; so that in this case the Nerves and Muscles of those Parts are most times Paralytic; it's most always a Sign of Death just at hand; it's seldom cured, and then only with Remedies filling the empty Vessels with good vital Juices, as are at the same time warming and corroborating.

786. This very first Kind arises sometimes suddenly without any evident Signs of any other Disease before: 'tis hardly Curable, and after Death it generally shews that the Lungs were Impoſthumated.

787. The Quinsie which arises from a Tumor has divers Names; either from the Nature of the Tumor it self, or from the place which the Tumor occupieth. Whence 'tis distinguish'd into an OEdematous, Catarrhus, Inflammatory, Purulent, Schirrous, Cancrous, and Convulsive Quinsie.

788. These

788. These Tumors do occupy the Tongue, its Muscles ; the Palate, Tonfils, the Uvula, and its Muscles ; the Cavities of the Os Frontis, of the upper Jaw, the Os Sphenoides, by the growing there and taking root of a Polypus still increasing, stopping the Nostrils, pressing upon the depending Palate, making the Jaws narrower, and and shutting up the Pharynx and Larynx ; they occupy all the Muscles of the Os Hyoides, or some of them ; the external, internal, common or peculiar Muscles of the Larynx ; the internal muscular Membrane of the Windpipe ; the superior Muscles of the Pharynx, and also the OEsophagus ; The very Muscle of the Gullet ; the Glands of the Windpipe, and they so nearly seated to the Gullet, that its Fistules may be compressed from a Tumor of those, as are all the Salivary and all such as are scattered about those Parts ; and lastly even those of the gristly Shield call'd *Thyroides*.

789. From which History (785. to 789.) well understood it is plain, Why so many, unforeseen and often fatal Endings of this Disease (783.)

790. But as this Disease is so manifold, and produces such various Effects, and consequently requireth so many Remedies and different Methods of applying them ; It will be proper to enlarge upon it, as much as the shortness of our intended Work doth permit.

Of the Watry Quinsie.

791. The Watry, OEdematous, and thin Catarrhus Quinsie is a disturb'd or painful exercise

cise of the Swallowing and Breathing faculty with a Lymphatic Tumor of the Parts, which either perform them, or are adjacent to those Organs.

792. It has its Seat therefore, like all other watry Gatherings, in that part of the Glands where the Lympha is laid up and squee's'd out of the Arteries.

793. Its Cause therefore is whatever hinders the free thoroughfare of the Lympha ; and those Causes are very numerous and very different. Every Compression of the Veins whatsoever, into which perhaps the Emissaries of those Glands do empty themselves ; an Obstruction grown in the very follicle of the Gland from a kind of Plaister, Phlegm, Stone, Fungus, and such like there produced ; an Obstruction in the Emissaries themselves from the said Causes ; a Compression of the same places from without ; a very cold Body applied to the Extremities of those excretory Ducts ; And lastly, a weaker Circulation of the Humors in general.

794. The Effects of this Evil are, a watry, white, cold Swelling ; a Compression of the adjacent Vessels, a hindrance to the Functions which depended on their not being press'd upon.

795. So that the Diagnostics are plain enough (from 791. to 793.) and the Prognostics from (794.)

796. The Cure is performable with such things as, 1. Resolve and move the obstructing Causes ; or remove the Parts entirely, either with Caustics or with the Knife ; “ (Which is the only sure way to prevent a Return when practicable,

"dicable, as it is easily upon the Tonfils, where
 "some People are distemper'd upon every little
 "Cold or change of Weather. *Hereto belong*
 all Emollient, Opening and Loosening Medicines
 in the shape of Fomentations, Cataplasms, Gargarisms
 Injections with Syringes, Washes or Steams; and
 outward Frictions to cause the Inflammation
 turn to the outside of the Throat. 2. All such
 as lessen the quantity of the Lympha, Empty-
 ing the same by opposite Doors; which is per-
 form'd with Masticatories, Blisters, " (applied
 "not only in the Neck behind, but even round
 "the Neck before, as I know it to be successfull
 "practised by several Physicians in London
 "Only the Women are shy of this, because of the
 "Deformity it sometimes occasions to their Necks
 "most times their greatest Pride.) Dry, Internal
 or External Sweats; Diuretics of the same Kind
 or smart Purges, as will promote watry Stools
 3. Abstinence from Liquids as much as possible
 a warming and drying Diet. 4. The Increase of
 the Circulating Powers, by the Means laid down
 (in 98, 99.)

A Schirrous Quinsie.

797. But if a Schirrous and much growing
 Tumor has occupied the Glands, it will be known
 by the Signs of a Schirrus (in 392.) And from
 its known Situation a Quinsie may be foreseen,
 and when there already, it is perceivable; If then
 the Schirrous Tumor can be extirpated, that alone
 will be a safe Remedy: Or the Surgeon must
 with a great deal of Prudence endeavour to lodge a
 Caustic

laustic in the midst of the Tumor to eat the same
out; which is feasible enough when the Seat is
near the Jaws.

An Inflammatory Quinsie.

798. But when either the Glands (788.) or
the Muscles are invaded by an Inflammation, then
ariseth a Disease properly belonging to this place,
because of its often fatal acuteness, and its sudden
violence oftentimes not to be overcome.

799. Its Cause is, 1°. Whatever is capable of
producing a general Inflammation (315, 376. to
788.) 2°. Every thing which doth direct the
Causes of an Inflammation chiefly to the places
described in (788.) principally to the Larynx,
Pharynx, the Os Hyoides, and its Muscles, and
to the Superior Parts of the Windpipe: These
are, a disposition towards inflammatory Distem-
pers peculiar to Young Men, abounding in Blood,
of a ruddish Complexion; A frequent and strong
exercise of those Parts by Oratory, Singing, Hol-
lowing, hard Riding against a strong and cold
Wind; Sounding of Trumpets, and playing on
the Flute or Hautboys; hard Labour in a cold
Air; a great Heat in the Spring suddenly over-
taken by a great Coldness; The dryness of the
Jaws from the reception and protrusion of warm
Air in Sunshine Weather, or in an Inflammatory
Fever.

800. When produced from these Causes it cre-
ates many, and some very frightful Symptoms,
according to the variety and necessity of the part
it occupieth.

801. If

801. If the Lungpipe only is affected (without offending the adjacent Parts) in its internal muscular Membrane, then arises there a Tumor, Heat, Pain, hot acute Fever, without any other externally apparent Signs; the Voice grows shrill, hollow, hissing, and the breathing in of Air occasions an acute Pain, the Breath is small, frequent, upright with extream working and panting; hence the Circulation of the Blood difficult; the Pulse wonderfully and soon wavering, prodigious Anguishes, straitness, and sudden Death. And this is one of the most fatal Quinsies, and which is hardly discoverable by any external Signs: And how much the nearer this is to the Glottis and Epiglottis, so much the more and sooner doth it prove Mortal.

802. If the Larynx chiefly be acutely inflam'd, and the Seat of this Evil be in the white Muscle of the Glottis, and together in the fleshy Muscles whose office it is to shut the same; there ariseth a terrible Quinsie which soon Strangles. The Signs are the same as the first in (801.) A violent Pain in the raising of the Larynx upon Swallowing, increased upon speaking or hollowing; A very shrill and screaming Voice; A very hasty Death with the utmost Anguishes. And this is the worst Kind of all, and not discernable by any outward Sign.

803. If only those Muscles are highly inflam'd which serve to lift up the Os hyoïdes and the Larynx, then are the following Signs apparent; Breathing is pretty free; Swallowing upon the Exercise of its first action acutely painful; and even

besides the Signs of Inflammations in general, and the same on those Muscles which may be distinguish'd by such as look narrowly into 'em.

804. But when the Pharynx is solely affected with this Disease, the Specific Signs are upon inspection into the Mouth visible; a pretty easie Breathing; swallowing painful and even impossible; The throwing back through the Nose whatever is offer'd to be swallow'd down; the same things drove partly into the Windpipe, and there causing a violent Cough: hence a Want of Meat and Drink; A drying up and an Exasperation of all the Humors in the Body; The Fever not very high; Death not following until the Distemper has been of a pretty long Continuance.

805. But if the Tonfils, the Uvula, its Membranous depending Cover, or its four Muscles (call'd *Pterygostaphylini*) are much inflamed; then happen almost all things as in the first (of 804.) Breathing is troublesome, difficult, not to be drawn through the Nostrils, or at least but little, and but narrowly through the Fauces; Meat, Drink or Medicines to be swallow'd, because of the straitness and violent Pains, are turn'd back to the Mouth; a perpetual hawking; a continual dropping of Phlegm towards the Cavities of the Tonfils; an acute Pain on the inside of the Ear, and in the passage from the Jaws thither; a cracking in the Ears whilst the Patient endeavours to swallow; sometimes an entire Deafness. This sort of Evil proceeds of late much from the Great Pox, and is much to be dreaded.

806. If all these Sorts of Inflammations (801. to 805.) do invade together or successively, it's easie to conclude that the Disease is like to be so much the fiercer as more of 'em happen together ; and that then also the Symptoms will be more in Number, and more dreadful in effect.

807. For then the return of the Blood into the external Jugular Veins, or through them, when compressed, being hindred, there ariseth a Tumor of the Jaws, Lips, Tongue, and Face ; the Tongue hangs out, twists and inflames ; the Eyes grow red and jut out in a frightful manner ; the Brain from the same reasons is suffocated ; hence are the Sight, Hearing, and Feeling dull, a Delirium follows ; the Mouth is kept wide open ; he Snoars ; lying down is impossible without being suffocated ; there is a redness, tumor, pain, pulsation, often in the Breast, Neck, Nape of the Neck, which are apparent ; whence the Jugular, frontal Veins, and those under the Tongue, have apparent varicous Swellings.

808. And every Quinsie doth run over all the usual Stages of the general Inflammations, occasions the same, and undergoeth the Changes into a Resolution, Imposthumation, Gangrene, or a Schirrus.

809. If therefore the Signs do shew that the Quinsie is as in (801, 802.) it ought forthwith to be inquired into, whether as yet it be a pure Inflammation as in (382. to 384.) And then ought a Resolution to be instantly endeavour'd by the most powerful Remedies, as from (395. to 402.)
i. The Patient therefore must immediately be let blood,

blood, to a great Quantity, at several times until Weakness, Paleness, Coldness, the falling of the Vessels shew, that the Strength of what remains is not able to increase anew the Tumor and the Stiffness of the Vessels. 2. The Belly must be loosen'd stoutly with either Purges or purging Glysters, frequently injected. 3. A Diet must be order'd of the thinnest and softest Kind. 4. Medicines of the Nitrous and Acid Kind. 5. Moist soft lukewarm Steams continually received upon the Part, external Fomentations, and Derivations by Blisters.

810. But the Sort of (803.) is seldom so dangerous as those (of 801, 802.) and requires the same Sort and Method of Cure as (809.) but less in number and force: And chiefly apply outwardly anodyne, loosening, and emollient Medicines in the form of Cataplasms, &c.

811. While, Lastly, the Quinsie described in (804, 805, 806.) is yet inflammatory; then ought the Medicines (of 809, 810.) to be jointly applied, adding moreover continual moistnings of the Mouth and Jaws with the softest, nitrated attenuating, warm, watry, diluting, fat loosening Medicines; Such as may be bore without uneasiness in the Mouth, and be applied to the Part with gargling gently, or with a Syringe be injected: This ought to be done continually to give no time to the Parts to grow dry again.

812. If all these Things having been omitted, too late, or in vain attempted, the illness be very recent, and choaking from a Cause situated higher than what will admit of cutting, with the worst

Symptoms of (807.) but not yet turned into a Gangrene of the Parts; Then ought the Physician without delay after having prudently shewn the extremity of the Danger, (whether it be done or omitted) propose the Operation of laying open the Windpipe externally; which Operation is called *Βερχτόμην*.

813. Which must be done, after a due preparation of the Patient's Body, in the Windpipe about a Thumbs breadth below the lowermost part of the Larynx; having first laid open the Skin, and Integuments; removed the Muscles, cut the Intervals between the ring-like Cartilages of the Windpipe; put in a Silver Tube; Then having removed the Cause which made this Operation necessary, curing and healing the Wound up again: In the interim, nourishing Glysters ought to be injected as frequently as possible until the Patient be again capable of swallowing.

Of the Imposthumating Quinsie.

814. But if the Evil has already got to such a heighth, that it be plain the affected Part begins to suppurate, by the Signs in (387.) then ought the same to be treated according to the Method and Rules concerning Imposthumes in general (from 402. to 412.) But chiefly there ought to be used constantly a gentle soft Gargle, a large relaxing Cataplasim to be applied outwardly; the place to be launced when it lies bare to the Touch and Sight; and if by the largeness of the Swelling the Patient can all the while neither swallow nor breath but with the greatest Difficulty, the
Opera-

Operation of (813.) must be call'd to his assistance.

815. But that Sort of Quinsie, which was first described in (801, 802.) can but seldom last long enough to attain to an Imposthumation, but it will either end well by a speedy and timely Resolution as in (809.) or otherways kill the Patient.

Of a Gangrenous Quinsie.

816. If also the Causes of the Quinsie describ'd in (799.) do increase, and dwell more in a noble Part, as in (801, and 802.) or even in the External, as in (804, 805.) it often turns into a mortal Gangrene : This we may know to be, 1°. From the general Signs of a Gangrene in (426. to 429.) being applied to the Parts here affected, whose Function is depraved ; 2°. From its peculiar Signs ; If there has been first an apparent Redness and Tumor which have suddenly disappear'd without any good Cause or Effect ; And if the Pain is also gone off in the like manner ; If the Jaws are suddenly grown smooth and even, dry, slick, and livid : When it is come to this pass, it is in vain to attempt any Remedy, for there is no possibility of a Cure.

817. A Quinsie from the Tonfils, the Uvula, the Palate being affected will turn and end in a Schirrus of those Parts from the Causes laid down in (392.) Whence it is easily known, and the Cure is but difficult, chiefly if this latter is already grown Cancerous. (See 79. N°. 7.)

Of the Convulsive Quinsie.

818. If the Nerves, which do move the Organs and Instruments of Swallowing or Breathing, are hinder'd to perform their Function upon those Organs there ariseth a Paralytic Quinsie; Such a one is said to happen from the Luxation of the prominence of the Second Vertebre (which naturally ought to stick into the First) or of another Vertebre of the Neck below the former. " Which
" is said to happen much to Hunters in very
" Mountainous Countries, when in falling from
" their Horses they put out these Vertebres, of
" which they wou'd die very soon, unless some
" of their Company (acquainted with the Cause
" of their lying motionless) did forthwith fall a
" pulling their Head one way and their Legs
" another with all their might, &c.) If any Cause of Convulsions doth invade the Muscles of the Pharynx or Larynx, there ariseth a sudden and suffocating Quinsie; such do happen in Epileptic People, in Hysterick and Hypochondriac often, and such as are often troubled with the Cramp; in them it often goes and comes again: It is chiefly cured with the Medicines, which are proper to remove the last mentioned Diseases. " This Sort
" of Quinsie I have seen kill a Boy of about
" seven Years old, after I had removed the Fits
" several times with proper Medicines; and he
" died in an instant as he was endeavouring to
" make Water, without so much as a Struggle
" or a Cry, though he had yet his full Strength,
" and was but little before playing about the
" Room.

“ Room. This happ’ned at *Eltham* in *Kent*; at
 “ one *Mr. Newland’s* the Child’s Grandfather :
 “ And I then call’d it a *Cramp* of the very
 “ *Bronchia*.

819. From this History of Quinsies (from 783. to 819.) we may come to the understanding of the Observations of *Hippocrates*.

A Quinsie without any apparent Sign, shewing it self only by an Orthopnæic Strangling, with an acute Fever, violent Pain in the Head or Legs, without any good Signs, is soon Mortal, and kills on the first, second or third Day.

A Quinsie coming as a Symptom to other Inflammatory Distempers, or if it be the Sorts of (801, and 802.) occasion’d by, or born from those of (803, 804, 805.) they all of ’em are mortal.

A Quinsie that forces Froth out of the Mouth, squeezing out a thin Rheum, with involuntary and insensible Stools, in a very acute Fever without any apparent Sign in the Parts; with a going off of the tumor, redness, and pulsation in the Throat or Tongue, yet Strangling; is always mortal, and that very soon.

Of the Genuine Peripneumony.

820. If there happens a real Inflammation in those Vessels of the Lungs that are capable of being affected therewith; that Illness is called, *A genuine Peripneumony*.

821. Such Vessels are the Bronchial Arteries, those of the softer Substance of the Lungs, and the Lymphatics, which attend the same throughout.

822. Whence it seems we may conceive two Sorts of Peripneumonies; the Seat of the one is in the Extremities of the *Arteria Pulmonalis*, and of t'other in the Productions of the Windpipe, call'd *Bronchia*.

823. And it may appear at first sight, that the first Sort is the most dangerous, and the last easier cured, but that the same may occasion the former, and that both have often the same Beginnings from the same Causes.

824. Which several numerous Causes may be brought over, 1°. To the General ones of all Inflammations all over the Body (from 375. to 380.). 2°. To such as chiefly affect the Lungs, as are, The *Air* being to a fault, moist, dry, hot, cold, heavy, light, poyson'd with caustic, adstringent and even with coagulating Exhalations: *The Chyle* made up of too gross, dry, and viscous Parts, having either too great or too little a proportion of Acrimony: The *Violent Exercises* of the Lungs, be it in Running, Wrestling, Striving, Singing, Hallowing, or hard Riding against the Wind: *Poisons* that are coagulating, corroding, tying up, receiv'd into the Veins, which carry the Blood more immediately to the Heart; Violent *Commutations* and Disturbances of what is call'd *the Mind*; a Quinsie with a great oppression of the Chest and an erect Breathing; a violent *Pleurisie* and Inflammation of the Diaphragm.

825. If these Causes have occasion'd the Disease; this will also according to the difference of its Seat (822.) produce divers and sundry Effects: For that of the Bronchial Arteries producing all the

the effects of an Inflammation (382. to 393.) it will at length by its pressing upon the contiguous Extremities of the Pulmonic Arteries (as by a Contagion) inflame them.

826. But when the very extream Vessels of the Pulmonic Artery are inflamed, the Blood stops, the Vessel is extended, the most liquid Part is squeez'd out of it in the manner of Sweating, the thickest is heap'd and throng'd together; almost all the Blood as yet capable to circulate is gathered together between the right Ventricle of the Heart and the extreams of the Pulmonic Arteries; hence the Lungs grow weighty, unable to unfold themselves and livid; the left Ventricle of the Heart is depriv'd of Blood, hence an extream Weakness, a small Pulse, soft, unequal, and uneven in all respects; small Breathing, quick, difficult, upright, often disturbed with coughing, and hot; Then the Blood that comes through the Veins towards the Heart stops at the ear of the right Ventricle of the Heart; an unusual redness comes in the Face, Eyes, Mouth, Throat, Tongue and Lips: At last comes on Death it self with its immediate forerunners, a Choaking with an unspeakable anguish, and loss of Senses.

827. If the Case as just now describ'd seisseth upon both sides of the Lungs at once, and violently, Death must very soon and unavoidably ensue; Nature not being in a capacity to wait for the Reliefs that are proper to remove Inflammations, and described (in 386. 395. to 402.)

828. But if it has laid hold of but one side of the Lungs, and but a small part of that, and the
Causes

Causes are not of the most violent; there is some hopes, but no certainty, that the Patient may be well cured.

829. So that we may know the Nature of this Disease and foretell its Event, by looking diligently into what has been said from (824. to 829.) Chiefly if we observe that it takes the same course with all Inflammations: So that it has different Aspects at the different Times of its duration, and consequently may terminate into Health, another Disease, or Death.

830. *It terminates into health*, 1°. By a beneficial *Resolution*, or by dissipating, if the Constitution of the Patient is not very dry, and hardened by Labour or violent Exercise, but rather somewhat soft like that of Women: If the Humors that occasion the Inflammation be not very harsh, but gentle and not too slimy; If the part affected be bronchial or of the soft substance of the Lungs, and be not too large. 2°. By causing the Patient as soon as possible to spit, freely, abundantly, yellowish with a little mixture of Blood, of a reasonable thickness, by which he perceives his pain to diminish, his breathing become easier; by which the Physician perceives the Pulse to beat larger and fuller than before; And lastly if it be not long before he spits smooth and white; which we may expect, and must fall out so, when rightly managed, if the Seat of the Illness is chiefly a bronchial or pulmonic *small Artery*: 3°. By Stools with much Choler, giving ease, and which bring away Matter resembling the wholesome Spittle just now described. 4°. By great quantities of
Urine,

Urine, thick, settling, giving ease, with first a red Sediment, and then whitening by degrees, and made such before the seventh day : which rightly succeeding the Patient breatheth easily, the Fever is gentle and of a good Sort ; the Patient thirsts no more, but he is warm, moist, soft and lax all over his Body equally. *NB. Hyppocrates* saith
 “ that loose Stools are mortal, but this ought on-
 “ ly to be understood of watry Stools, and such
 “ as the Patients breathing is not mended by, but
 “ rather made worse, which ought to be stopp’d
 “ immediately. *Mercurialis* finds out another way
 “ to excuse *Hyppocrates*, and to reconcile him
 “ with *Galen* and *Aretæus* : He thinks *Hyppo-*
 “ *crates* meant nothing else, but that a Looseness
 “ in the very beginning was mortal, but beneficial
 “ if happening together with the other Signs of
 “ a good Concoction, or at the time thereof : and
 “ for this he quotes the XL §. of the 7th *Epi-*
 “ *demicorum*.

831. It terminates into another Disease capable of being produced by any Inflammation, or that particular one of the Lungs, as they are damaged and thereby hindred from performing their Offices duly.

832. Therefore it first terminates in an Impost-humation, when the Inflammatory Matter (376, 377. 824.) not being able to resolve and dissipate itself through the strength of Nature (380.) nor corrected by the help of art, yet becomes gentler (387.) stagnating, hot and throbbing, breaks the smaller Vessels, resolves the same into puru'ent matter, and by extending the Sides of the pressing Sub-

Substance, or eating through the same, forms within a fourtninght an Abscess or a *Vomica*.

833. That this will happen may be foretold to a certainty in making the following Observations.

1°. If there have been sure Signs of a Peripneumony from very corrosive Matter (825.828.) but yet not in the highest degree, as in (826.). 2°. If no resolution, nor the Signs thereof (830.) have appear'd timely, that is, before the fourth day. 3°. If the Symptoms (825, 826.) mentioned have not been removed by well digested Spittle, and evacuated in due order according to the critical Days, viz. the third, fifth, seventh, ninth, eleventh, and fourteenth; and that changing successively, and mending till it is come to that colour and consistency as promiseth a Cure: Or if the same Symptoms have not been conquered by Bleeding, Medicines or Diet. 4°. But if on the contrary the Symptoms (not altogether the worst) continue obstinate, with a continual Delirium, a soft and floating Pulse, like to the gentle motion of the Waves in a Calm after a high Wind.

834. That it is actually gathering a judicious Physician may know by the following Signs, 1°. If those of (833.) be present. 2°. When the Patient is often taken with slight shiverings sometimes in one place sometimes in another, without any visible apparent Cause from without, such as might be uncovering of himself, or drinking suddenly of any cold Liquor; when the pain hath relented and the difficulty of breathing remains, a Flushing appears upon the Cheeks and Lips, the Thirst continues, and a little troublesom Fever hangs

hangs upon him, and chiefly towards night, and the Pulse is weak and soft.

835. That this Impoſthume is already formed one may conclude, if the foregoing Signs of (833, 834.) have already laſted their uſual time. 2°. A conſtant dry Cough, increaſing after every Meal or motion; A difficult ſhort breathing with puffing and rattling increaſed alſo after Meals or Motion; When the Patient can lye only upon that Side where the Impoſthume is; When there is a continual little Fever though ſometimes periodical as to its Acceſſes, heightned generally by eating, drinking and motion, with a redneſs upon the Cheeks and Lips; the Patient loſeth his Stomach, is very dry, ſweats in his Sleep chiefly about his Throat and Forehead, maketh frothy Urine, looks pale, grows very lean and extreameſly weak.

836. This Impoſthume when once made has different Events. 1°. It ſuffocates the Patient, becauſe the Tumor either occupieth all that Side of the Lungs, or by its compreſſion doth interrupt the motion of thoſe parts as were yet free of the ſame. 2°. It ſuffocates him when it breaks ſuddenly and ſends forth all the Matter contain'd therein at once into the Windpipe. 3°. It breaks looſe and emptieth itſelf in a purulent Spittle, which maketh the Patient eaſier, but conſumeth him. 4°. It breaks looſe emptying itſelf into the cavity of the Cheſt, or into the ſpace of the dilated Midriff, which divides the Cheſt into two parts. 5°. From whence ſeveral ſorts of Conſumptions or an Emphyema, which moſtly kill.

837. There is another Distemper into which the Peripneumonia vents itself, when the inflammatory Matter already become purulent (832, 833, 834.) is again taken into the Pulmonic Veins, and is remixed with the Blood and thrown upon some parts, so that the Lungs are freed, but another part burthen'd with the same; which part if less necessary to life, the *μεταστάσις* or transportation is reckon'd happy: But if it happens to be the Liver, the Spleen, the Brain or such like, it is generally so much the worse. Hence happen Imposthumes in, near, or behind the Ears, in the Legs or the Sides of the Belly.

838. A judicious Observer may know that such Abscesses are like to be, 1°. If with the Signs of a Peripneumony not of the worst kind (833, 834, 835.) he seeth a Fever, which is not violent, nor malignant, but continual, with a pain, straitness, heaviness of the Chest, and a difficulty of breathing, but none of these to a violent degree, and without the Signs of a Dissipation (830.) 2°. If the Pulse together with these Signs be constantly and in all respects very fluttering. 3°. And chiefly if he be sensible in those places (837.) of pains, redness, heat, and stretchings in the Muscles.

839. We know that those Abscesses are to be in the Legs, 1°. If the Signs of (838.) be present. 2°. If at the same time there be Signs of a very slight Inflammation at the sides of the Belly.

840. But we know that the same will be about the Ears. 1°. If the first Signs of (838.) be present there. 2°. If at the same time the sides of the Belly be without an Inflammation, and very soft.

841. We

841. We know them to tend towards the Liver, if the first Signs (838.) be present. 2°. If there be a remaining pain in the Liver, with a yellowish Urine, almost like that in a Jaundice, and a yellow Skin. From hence, if the Imposthumation fixes in the Liver, ariseth a dreadful Scene of Evils, of which hereafter at large.

842. These Imposthumes (839, 840.) if they ease the affected Lungs, if they carry off the Fever, if they remain full of Matter and make a good discharge as it were through a Fistula, and if they happen time enough before the ninth day; In such cases they are always advantageous: But if they do not appear before the Spittle is purulent without being yellower, or relieving the Patient in the particulars before named; in these cases they are to be deemed ominous: But if after having appear'd they disappear again, and that in the beginning of the Illness, and the Peripneumony returns again, then they are altogether mortal Signs.

843. It happens also that this Disease terminates in a callous Tumor or a Schirrus in the Lungs, if the matter and circumstances of (392.) meet together. From this the Patient is all his lifetime troubled with a Cough, and breaths with difficulty unless he sits upright, which disorders are still more troublesome after Meals or Motion: This Case you must suppose present, when the Signs of a bag of matter in the Lungs (835.) are absent; And here you'll generally find the Lungs to stick to the Pleura.

844. Lastly,

844. Lastly, when the Bronchial Artery is invaded with the most violent sort of Inflammation (388.) and that from an inward Cause or an external one (824.) there ensueth suddenly a Gangrene, and from this quickly after an entire Mortification, because of the Quantity and often repeated Motion of the Blood at each breathing and contraction of the Heart, by which so tender a Body and of so soft a Substance as the Lungs are soon destroy'd. That this will be, may be learn'd, 1°. From the Signs of the most violent kind of Peripneumony (826.) which has not mended by any accident, nor by any application of due Remedies. 2°. An extream Weakness coming on suddenly and shewing it self chiefly by the Pulse. 3°. From the Coldness of the Limbs, and other extream Parts. And we know this same Gangrene to be present already, if, the foregoing Signs having appear'd, the Patient spits ichorous, thin, ash-colour'd, livid, black and stinking Matter: And then Death is at the Door, and seizes him suddenly.

845. To the Knowledge of all these different Kinds of Peripneumonies, and of their changes into other Distempers mention'd in (830. 832. 836. 837. 843. 844.) Industrious and diligent Physicians have attain'd by a curious attention to the usual course of this Distemper in general, and also by an exact Anatomy of such as have died of them.

846. Whence it is past all doubt, that this Disease so amply describ'd by the Ancients by the Name of *Peripneumony*, is in its Origine and Nature

ture nothing else but a true Inflammation of the Substance of the Lungs.

847. The Prognostic cannot therefore be very difficult, it appearing, *That this Disease is always very dangerous* ; because of the indispensable necessity of the Lungs remaining capable of the vital Function (Breathing) ; and of the Necessity of removing incessantly the inflammatory Matter ; because of the great quantity of Blood which is continually thrust into the Lungs with all the strength of the right ventricle of the Heart, at each one of his Contractions ; because of the perpetual motion of the Lungs themselves at each Breathing ; because of their Situation being incapable of admitting any topical Medicines ; because of the extream tenderness of their Vessels easie to be destroy'd ; and chiefly because it is impossible to make a Revulsion here, which is so necessary a Remedy to remove Inflammations.

848. From this it appears, when, wherefore, and with what Symptoms it must needs terminate into a sudden Death ; *viz.* If the Lungs are inflamed all over together with the Heart ; when this last seems to fall on one Side, that is, when the Heart is bore down towards one of the Sides, the Patient is taken with a general Palsie, lyeth cold and senseless, and dies either on the second or third Day. If the Urine is well digested in the beginning of the Illness, but grows thin after the fourth Day ; If in the height of the Illness the Patient is obliged to be set upright ; If he voids purulent Matter in his Stools without being eased ; If the Peripneumony is a *dry one*, with a hot rattling

ling in the Throat, as if the Lungs were full of Matter ; If the Disease be very violent in a very dry Constitution, and in Bodies that are hardned by their way of Living and Exercife, as are most Husbandmen, Hunters, Soldiers, and the like ; If it be a bad Sort, with a dropping of Blood from the Nose ; If it be a dry one with red Spots over the Breast, which argue the Inflammation to have spread it self throughout ; If a strong Defluxion of sharp matter from the Brain with violent Sneezings hath preceded or doth follow ; If it took its rise from a hot burning Fever ; If there appears immediately after the fixth day a bilious Spittle with Pus ; If the Spittle has been from the beginning very bloody, of an entire yellow, or white and round, very frothy, not allaying Pain, if dark brown, filthy like unto Lees of Oyl, black, growing livid, uneven and rusty ; If then neither the Fever has abated, nor the Breathing mended, he dies on the seventh or the ninth Day : And you may see Death coming on apace, when the Pulse fails them, they grow cold all over, only their Breast, Neck, and Head are in an apparent heat with Sweats, and the Cheeks first glow, and then turn to a livid paleness.

849. *The Method of Cure* is to be varied according to the different state of the Illness, and the variety of Symptoms ; so that what may do Service at one time, will do Damage if applied at any other improper time.

850. If therefore in a Peripneumony all the Signs be present, described in (830. N^o. 1.) Then the Physician ought to prescribe Quiet and the avoid-

avoiding of any Passions; The Air, if not naturally moist and temperately warm, must be made so by Art: The steam of warm Water ought to be directed to his Lungs, Nostrils, Mouth, Feet and Legs; his Diet ought to be small, his Medicines of the cooling kind, such as are Emulsions, Ptyanes, and Pectorals sweetned with Honey, and all these made more effectual by the addition of several preparations of Nitre or Saltpetre.

851. But if the Case stands as in (830. N^o. 2.) you must make use of all the just mention'd, and also of Emollient, cleansing Medicines, such as promote Spitting; gentle Cordials, and Steams directed to the Parts as before mention'd: No bleeding must be allow'd of, no purging, no sweating, nor any one thing that can disturb or put a Stop to the Spitting.

852. If the Case is as in (830. N^o. 3.) you must order gentle and loosening Glysters; the Belly must be fomented with warm Fotusses, not spirituous; The Patient must drink now and then of a gentle opening Apozem, and besides observe all things of the two preceeding Aphorisms.

853. If it is as in (830. N^o. 4.) do all things as in (150. to 852.) And besides, bathe your Patient's Feet with warm Water; Let the Kidneys be fomented from within with emollient Glysters and from without with wet Clothes, and let him drink plentifully of some cleansing and gently diuretic Apozems. NB. " There is in *Oysters* what
" will answer several Indications in this Distem-
" per, as cooling, promoting Spittle and Urine:
" This the Ancients knew, and therefore always

“ recommended the Liquor of 'em boyl'd up to
 “ Consumptive People, and such as were in the
 “ Case here before us. *Tulpius*, both a famous
 “ Physician and a Burgomaster of *Amsterdam*, in
 “ his noble and elegant *Book of Observations*,
 “ *lib. 2. cap. 8.* tells us the History of a Woman,
 “ who was entirely emaciated and despaired of,
 “ and was recovered by the sole eating of Oy-
 “ sters, which she happen'd to have a sudden
 “ Longing for. *And I my own self* upon reading
 “ of this Cure tryed it in a Young Man in *Dept-*
 “ *ford* about five Years ago in the same case, and
 “ succeeded. And Nature seems to shew us the
 “ Way, for she hath provided a plenty of Oysters
 “ in *Essex*, which by a Common Observation,
 “ is the most invaded with Distempers of the
 “ Lungs of all others in *England*, and perhaps in
 “ the whole World.

854. But if the Inflammation be recent, great,
 dry, in a strong Body, who was very well just
 before, and used to Exercise; which is describ'd
 by its Signs in (825, 826.) In this Case you
 must begin immediately, 1°. With a speedy and
 large Bleeding, which according to the degree of
 the Illness must be moderated or repeated, that
 the bulk of the thick'ned Liquors may be lessen'd,
 and room be made for such as are to dilute the
 whole Mass. 2°. You must immediately get the
 Patient to receive into his Lungs with the Air
 softning and moist'ning Steams of warm Water or
 emollient Decoctions, and foment the other Parts
 of the Body with the same. 3°. You must im-
 mediately help him with thin and diluting Deco-
 ctions,

tions, such as resolve, soften, and loosen the rigidity of the Fibres, adapted to Inflammations in general, never omitting a due proportion of Nitre, and Anodynes, in small Doses, but often repeated and taken as hot as they can be taken down; for Cold drink is Death, or at least very prejudicial in this Distemper. 4°. An opening cooling Glyster ought to be given daily. 5°. And the Patient kept to a very low Diet, cooling at the same time, and as much as possible from the vegetable Juices of cooling Herbs and Fruits.

855. If the Inflammation be great, with a high Fever, and other violent Symptoms, and has lasted now longer than three Days, and there be Signs of its tending already to an Imposthuration (833, 834, 835.) the Danger is always very great, though now the Illness is like to last some time, and so to give an opportunity for the Cure. In this Case, 1°. You must either not Bleed, or at least very sparingly, if there is some urgent Symptom that commands it. 2°. The Diet must be low but somewhat thickning, and of such Things as are thought to promote the ripening and digesting of the Spittle. Such are the Jellies of Fishes or Bones, Bowels or any other fleshy Parts. 3°. You must use such Fomentations and Steams that may prove softning to the Lungs and ripening at the same time. 4°. The fifth and sixth Days use the same things, adding Suppings of such Liquors as may promote a gentle beneficial Cough, and fill the Vessels, so that on the seventh Day the Part affected may be reliev'd by the emptying and discharging of well-digested Spittle, the Vessels be-

ing now reduced to a smaller Bulk than they were at the beginning of the Inflammation ; And by such a Method the Patient will be able to bear that great and necessary Discharge if at the same time he is supplied with proper Cordials and Aliments. “ The best thing that can be given at “ this Juncture is warm Barley-broath sweetned “ with Honey with a little Cinnamon.

856. If by the Signs of (835.) it appears that there is already an Imposthume form'd in the Lungs, the Physician must use all Means to break it forthwith, and to make a Discharge thereof through the Windpipe, and then order such things as will cleanse and heal the place in a small time, before it can acquire any degree of foulness or ulcerate. NB. “ The reason is, that otherways “ the Imposthume may break of it self unex- “ pectedly in the Night, and choak the Patient “ at once.

857. This Imposthume may be broke having first duly prepared the Patient with a sufficient quantity of soft Food, fat Broaths with oleous Wine, Directing towards the Lungs the hot Steams of Wine, Vinegar or Euphorbium ; causing the Patient to hallow, cough, take slippery and oleous Medicines, setting him on Board of a Vessel in hard Weather, or jolting him in a Coach. NB. “ *Hippocrates* and most of the Ancients follow'd this “ Method constantly ; See here an entire *Recipe* “ of that curious observer of Nature and bold “ Practitioner, *Lib. 2^{do}. de Morb. §. 44.* The “ Man, who is so affected (speaking exactly of “ the Case before us.) and has now reach'd the “ tenth

“tenth Day from the beginning of his illness’s
 “tending to an Imposthume; Wash him with
 “a great Quantity of warm Water, and *Mix*
 “together a small Quantity of Aron root bruised,
 “some Grains of Salt, a little Honey and Water
 “with a little Oyl. Then pull out his Tongue
 “and lay some of this upon it, viz. to make
 “him Cough: And if that doth not do; let
 “two or three strong Fellows take him by Neck
 “and Shoulders and shake him with all their
 “Strength. Which sort of Practice we very
 “rarely dare follow now adays in these Coun-
 “tries, where it doth carry a Face of roughness
 “and Cruelty.

858. As soon as by certain Signs it is known, that the Imposthume is broke, you must confine your Patient to a Milk-Diet, allowing him only the softest kind of Vegetables, and such as do not easily rotten, such are Turnips, Parsnips and the like. (Avoiding all sorts of Cabbage except the Red.) In the day time give him detergent Decoctions gently loosening, made of Scordium, Marubium, the Opening Roots, &c. But at Night very gentle Opiates, never exceeding half an Ounce of Diacodium: And he must continue the use of softning Steams, take the Air on Horseback, in a Chaise, or in a Boat.

859. But if by the Signs of (838.) it appears, that the Case is already as in (837.) but no certainty whether the Matter is going to remove it self; then you must bid your Patient to keep very quiet, and his Strength and Spirits up with a light Diet, chiefly Spoon-meat gently spiced, allowing

a small quantity of proper Wine. Let the Medicines be at that time Emollient, but of the Class of those that are least aperient; Solace the Lungs with soft Pectorals; and thus in a little time the Matter will have determined it self to one place or another; or being made more fluid, it will empty it self its proper way by Spitting.

860. But if with the Signs of (838.) those of (839, 840.) be also present, whence you are sure that the Matter has already removed it self, then do what has been just now mention'd, and work upon the place, where you foresee (839, 840.) that the Matter is going to work it self through, by sucking with dry Cupping-glasses, made of Horn, or Iron, or Glass; by loosening the Part with Cataplasms; by stimulating by drawing or blistering Plaisters; " Which applied to the Legs
" do at all times ease the Lungs greatly, and
" do promote Spitting and relieve difficult Breath-
" ing; By such Openers as of themselves, or with the help of the rest, may facilitate the Discharge in that place.

861. If the Case is as in (841.) do the same things as in (859, 860.) then you must exhibit such Medicines as are more opening and of a soapy nature, or even Castle-soap it self in a draught of Milk; Such as are said to purge the Liver,
" Viz. All Compositions that have Rhubarb in
" them, and are at the same time Diuretic and
" somewhat Chalybeat: Glysters and Fomenta-
" tions repeat daily.

862. But the Case as in (843.) doth rarely admit of a Cure, unless it be by continuing long together

together the Use of Emollient Medicines, outwardly and inwardly; by riding on Horseback, or any other constant travelling Carriage; And even by this you can only flatter your self to make it somewhat easier, and to put off the evil Day for a while.

863. If it be already changed into a Gangrene (844.) it is altogether incurable.

864. But if the Peripneumony had already begun to go off with a Spitting, and that the same doth stop; then all hands must be set to work to bring it back again: This will sometimes be occasion'd by a sudden cold Air let in upon the Patient; a great Drying come on from various Causes, a hot Fever coming on afresh; heating Medicines or Cordials, a Looseness which is not Critical, great Sweating and a violent Passion.

865. Then will the neighbouring Parts immediately be invaded by a fresh Inflammation from the stagnation and heaping up of the peccant Matter, and from thence all the Symptoms of the original beginning Peripneumony (825, 826.) And whereas this comes now on a Body weaken'd already with the former, it generally Kills in a little Time.

866. The Remedies for this fatal Relapse and its Consequences, (865.) are to mollify the Lungs in all haste, as well as Mouth and Nose, and moisten them with continual Steams, and even making the Air of the Room to be constantly like unto them; Give the Patient large Draughts of the same thin and warm Liquors as said before, chiefly with Honey and Vinegar: Give gentle
Diapho-

Diaphoretics that may gradually resolve and dissipate this new Inflammation; Such as is Antimonium Diaphoreticum with some Grains of Nitre; gentle Opiats, and with all possible Care avoid Sweating; and let him not by any accident be frighten'd or put in a hurry. " All these things
 " here mention'd must be tried instantly one upon the other, for unless some one doth take
 " effect very speedily, your Patient dies in a few
 " Hours.

Of the Spurious Peripneumony.

867. That Sort of Peripneumony, which happens often in the Winter from Cold, or in the Spring from too sudden a Heat coming upon cold Weather, doth usually proceed from a slow Phlegm spread in the Blood throughout the Body, and occasion'd by the Spontaneous glew described in (69. 72.) which gradually lays hold of the Lungs, till it unawares passes into this dreadful and often mortal Disease.

868. When this Evil is somewhat increased, it has already produced in the whole Body several Effects, (72. to 74.) and besides them, such also as are usual to a slow Peripneumony (825, 826.) Whence it appears to be very difficult to cure.

869. For if you let Blood in that Quantity as the Nature of this Disease requires (854.) You do a great deal of Damage, because of the weakness of the Bowels, and of the Liquids being too sluggish and not fitting the Vessels; Whence it is that the same seems to be beneficial at first, but soon proves hurtful and increasing the Disease in most Circumstances.

870. As

870. As to the attenuating Medicines, which in this Case are so much extoll'd by some, they rather increase the Degree of Thickness, and drive in farther the stagnating and obstructing Bodies, as they increase the force and motion of the Humors in and upon the Lungs; and they consequently by so doing, soon render the Disease mortal.

871. This Disease is common to aged, phlegmatick, cold People, such as have Defluxions and Rheum falling from the Head; it usually invades upon any occasion, which by moving the stagnating Fluids too suddenly make them fall upon the Lungs; such as Running, Declaiming, Singing, Drunkenness chiefly occasion'd by very hot or spirituous Liquors, junquetting, The heat of the Fire, Bath, or Sun, chiefly if a great Cold follows this Heat suddenly.

872. By its deluding gentleness it destroys such as scarce thought themselves ill: For beginning with a small Weariness, Weakness, a general Prostration of the motions of the Mind, a difficulty of Breathing and an oppression of the Chest, it causes such small Motions, that there is scarce enough Fever or heat to warn you of the Danger: Afterwards come on by Fits uncertain Shiverings and slight Fevers; upon which the difficulty of drawing Breath and Weakness follow, and sudden but unexpected Death, of which there was hardly any Sign either in the Urine or in the Pulse.

873. It's cured by this most prudential Method; 1°. Let the Patient first be blooded out of a large Vessel. 2°. Let a Glyster be injected daily till it appears by proper Signs, that the Lungs
are

are eased. 3°. Let his Diet be of thin flesh Broaths, with some Juice of Limons or Oranges, his Drink also small of Water and Honey. 4°. Use the Steams and Smoaks describ'd in (866.) diluting, cleansing, and gently opening Apozems in large Quantities; bathe the Legs and Feet, and lay on many and large Blysters.

874. From all these (820. to 874.) Reasons may be given, why this Disease happens seldomer to Children and Women? and likewise why it ever seizes those People whose Solids are of a looser Contexture? Why it is easily cured in them and almost without any Help? And why so difficultly in strong and exercised Bodies? From the same it is plain also, why this Disease comes as a Symptom in most other Diseases just before Death? So that a Peripneumony is the proximate Cause of Death, and the last Effect of almost all Mortal Diseases.

Of a Pleuresie.

875. A Pleuresie is said to be present, when the Patient is afflicted with an acute continual Fever (564. 567.) with a hard Pulse, with an acute Inflammatory Pain and Stitch (383. N°. 3.) which are much increased upon breathing in the Air, and milder in the breathing out, or while the Patient gently keeps in his Breath, gentler also when he performs breathing without moving the Chest, but chiefly by the repeated raising and lowering of the Belly; he coughs almost incessantly, which because of the violent Pain it causes, he strives to Suppress.

876. When

876. Whenever at the same time he spits such symptomatical Spittle as is common in Diseases of the Lungs, it is call'd a *Moist Pleuresie*; when that is wanting, 'tis a *Dry Pleuresie*.

877. There is no part of the internal integuments of the Chest which is not capable of being seized therewith; The whole Pleura therefore, the whole Midriff; hence its Seat may be in the fore or back-part, right or left side, higher or lower, more outward or deeper place equally: But most commonly in the Sides.

878. But when the very Membrane, which doth beset all the Ribs inwardly is the Seat of Pain, then is it a *Genuine Pleuresie*; But if it be higher, and the intercostal Muscles, and those which are higher than them be affected, its called a *Spurious Pleuresie*.

879 It chiefly invades grown, sanguine People, such as have eat or drank much, or taken violent exercise, as seldom belch sower, prone to Inflammatory Diseases; in the Spring, chiefly when the same grows suddenly very hot after a sharp frosty Weather, or in the Winter when the Wind blows sharp out of the North-East, and then it is called an *Idiopathic Disease*; that is an Original one, not owing its Cause to any other more principal Disease.

880. But if the same arises from the Cause of another Inflammatory Disease moving and translated to the places describ'd in (877, 878.) then is it a *Symptomatic Pleuresie*.

881. It owns for its antecedent Cause, 1°. All that is apt to produce an Inflammation of any kind,

kind, (375. to 380.) 2°. Whatever doth direct the Cause of it chiefly to the Pleura; to which belongs most the Constitution of the Patient, the narrowness of the smallest Arteries of the intercostal Muscles and their rigidity; a foregoing Distemper which has left a Disposition towards those Effects, such as is a Schirrus of the Pleura, or a Callosity of the same, an adhesion of the Lungs to the Pleura, (which is observed to be frequent in most Northern Climates) the Nature of a predominant Epidemical Disease; a cold Air driven violently through some narrow Passage upon the naked Body before over-heated by Labour or Fire; very cold Drink taken suddenly when the Body is disposed in the same manner as aforesaid; a cold, frosty, Northern Air in the Winter. 3. A deposition of an Inflammatory, ichorous, and suppurating Matter, first predominating in the whole or in some part, and then from any Cause whatever deposited or translated into this Part, as it will happen in the Measles, Small Pox, ulcerous Tumors, great and wide Ulcers suddenly disappearing, the Matter thereof being suck'd up by the Veins.

882. This History (from 875. to 882.) Its Course to be expounded presently (from 803. to 907.) and the dissected Bodies of such as have died of Pleuresies do clearly intimate, That it is an Inflammation of the Blood (371.) in the small Arteries of the places mentioned (877, 878.) occasioned mostly by a preceeding acute Fever.

883. Hence the History of this Disease may be clearly deduced: It begins with a desire of feeding

ing, which is often very great, with a Coldness, Shivering, Weakness, Weariness, and a Fever: It goeth on with a Heat gradually increasing to a Burning, a Drought, an entire Loss of Appetite, a Pain from being light increasing till it becometh very violent, breathing much vitiated: when in its force there is a violent Fever, but less apparent because the Patient holds his breath as much as possible, and is almost suffocated upon account of his endeavouring to suppress the most violent pain, which he could not but feel, if he should breath out; which often deceives the Physician much to his dishonour: Then doth it terminate variously, according to the several Causes, but chiefly the different changes of the Inflammation (See 386. to 393. 492. to 500.) the different nature of the place which the Disease has laid hold of (877, 878.) and the Consideration of those Circumstances; according as more places (877, 878.) are affected at once; as the motion of the circulating Liquor is more violent, (see 92. to 102.) or the Malignancy of the very principal Disease is greater (564. 567.) So are the several Symptoms worse, and chiefly do the defects of Breathing and Pulse more widely differ from the natural state of both, as likewise do Spittle and other Excrements.

884. It terminates in Health, other Diseases, or in Death.

885. Into Health by the help of kind Nature or by Physick in the beginning, while the Disease is yet in its simple state.

886. It is cured with the help of Nature, or a kind

kind Resolution, or a Concoction and Excretion of the Morbific Matter.

887. By a Resolution, if the Causes of (386. 401.) do concur at the same time; and then doth the lenity of Symptoms inform that nothing is necessary to be done but to keep the Patient to a thin spare Diet, give him the gentlest Openers, which together with soft Fomentations will ease the Pain and help to remove the Cause,

888. By a Concoction and Excretion of the Cause it is cured, chiefly observing these Things, 1°. As often as the Piles do let out a sufficient quantity of a well qualified liquid and at a reasonable time. 2°. As often as the Patient has voided a great quantity of thick, hypostatic Water, *with a Strangury*; (“NB. I have been an Eye-witness how Dr. Boerhave twelve years ago did in an Hospital at *Leyden* prognosticate the Recovery of a Pleuritic Patient, who did complain of a Strangury, not from any Blisters, or or any other Medicines, and that it actually fell out as he did foretell us.) When the same has been pretty high-colour'd with a white Sediment before the fourth Day, and that the Symptoms did at the same time abate: which sort of Urine has also cured a dry Pleuresie. 3°. If the Patient voids by Stool a great quantity of yellow bilious Matter before the fourth Day, and is eased thereby. 4°. If ichorous, purulent, and fistulous Imposthumes, running long and begun before the sixth Day, have shewn themselves behind the Ears, or in the Legs according to (837. to 843.) 5°. If the Pain in the Side is removed to the Shoulder,

Shoulder, Hand, Back, with a Numness, Pain and Heaviness of those Parts. 6°. If the Patient spits plentifully from that Part, and is eased thereby, without a Rheum at the Nose, in a great quantity at first like Matter, but soon changing into white, or before the fourth Day; continuing all along or not being long suppressed without returning as before; for then you may expect a Cure on the ninth or on the eleventh Day.

889. When the Signs duly observ'd do confirm that the state of the Pleurisie is such as just now described, then ought the Physician to endeavour at no change, but only to continue and to encourage all Evacuations or spontaneous Translations of the morbid Matter. Bleeding therefore is not proper here, neither ought any other kind of Evacuation or Alteration to be made. But, 1°. Use a soft thin Diet, let Body and Mind remain quiet; the Air be made temperately warm and moist; the Sleep be natural or procured by gentle Paregorics; and all Medicines be soft, small, and gently opening. 2°. All proper Evacuation which appears in each particular case to be beneficial is to be encouraged and help'd; so that in the Case of (888.) N°. 1.) the Anus ought to be fomented with a soft, loosening and aperient Fomentus, or if that doth not answer, Leeches must be applied to the Hemorrhoidal Veins, till they have suck'd a good quantity of that gross Blood. If it is as in (888. N°. 2.) The like Fomentations ought immediately to be applied to the Loins, the Perineum and the Lower Belly; Gentle opening Diuretics to be given; the Air made somewhat
Q cooler;

cooler; Sweats and other Evacuations to be avoided; soft Diuretic Glysters, with some Turpentine, to be injected. But in the Case of (888. N^o. 3.) The like Emollient Fomentations must be used all around the Abdomen; Loosening Glysters injected; a loosening Diet order'd. When the fourth State of (888.) is present, foreseen from (838.) and that the Place as in (839, 840, 841.) is also known, Then ought to be put in practice the means mentioned in (859, 860, 861.) making an opening and keeping the same open for some time by suppurating Medicines. In the Case of (888. N^o. 5.) besides the Means common to the preceding, the Parts into which the Pain is removed, must be fomented with soft and warm Decoctions; to be gently rubbed; and to be stimulated with gently drawing Plaisters. Lastly, in the Sixth of (888.) all things ought to be done which were advised in a kind Peripneumony, and consequently all things be brought hither from (850, 851.) and executed.

890. But a Pleuresie is also cured by Art without any remaining illness after it, chiefly by this Method; If the same Pleuresie be recent before the end of the third Day, yet violent from the many and strong Symptoms (875. 883.) and Dry (876.) in a strong, exercised dry Body, without the Hopes or the Presence of (887, 888.) Then let the Patient immediately be blooded largely, with a quick running Stream out of a great Vessel, and a large Orifice, keeping his Body quiet and leaning backwards, enforcing his Breathing all the while with Coughing or Panting, fomenting
the

the Side at the same time, and gently rubbing it; Which bleeding ought to be continued till the Pain seem to abate pretty considerably, unless a fainting Fit forces you to leave off sooner, at whose approach the Vein must immediately be stopped; Bleeding ought to be repeated according as these Symptoms do return, upon whose account it was done the first time; and when that Skin (384.) doth not any longer appear upon the Surface of the Blood, it is time to forbear any more Bleeding. 2°. From the Beginning ought to be used Fomentations, Bathings, warm Steams, Liniments, Plaisters and the like, which may be of use as they loosen, resolve, mitigate, and avert. (See 395. N°. 6. 398. N°. 3. 3°.) Then ought those Medicines to be administered, which dilute, resolve, loosen, mitigate, cool, ease pain, or lay it asleep: Which being taken warm, moist, and in great Quantities do help, and are to be varied according to the different changes and faces of the Disease, always providing to chuse such as are the most contrary to Putrifactions. 4°. There is occasion for a small, soft, cooling Diet contrary to Inflammations. 5°. Every thing is to be avoided, which is drying, heating, increasing the Motion of the Blood; such are the heat of the Air, Sun, Fire, Bed, Diet and Medicines.

891. The Continuance or Repetition of all which is to be learn'd from the obstinacy of the Disease, or its remission and transition into perfect Health.

892. A Pleuresie terminates into other Diseases,
1°. When the Inflamed place doth Suppurate,
Q 2 which

which we know when it will be α . From the general Signs (387. 402.) β . From the obstinacy of the Pain, Cough and Fever, lasting beyond the fourth Day. γ . From the absence of the Signs of a Resolution (887.) and of an entire Cure (888.) δ . From having neglected the Means laid down in (890.)

893. That this Imposthume is already gathering, is known from the general Signs in (405.) but chiefly in this Case from a Shivering often returning without a Cause, and from the Signs set down in (834, 835.) concerning the Peripneumony, comparing these with the time that the Disease has lasted : Hence we may also know when it is perfected, and it is sometimes evacuated through the Lungs by Spitting.

894. But this Imposthume will be broke by its own Matter, whence the Pus falls into the Cavity of the Chest, the Ulcer by the Production of more new Matter still heap'd on the first, fills up the whole Cavity, consumes all the Flesh and Substance of the whole Body : That this has happen'd is known from the just mention'd Signs in (892, 893.) the Continuation of the Disease until the fourteenth Day ; from a sudden relenting and quick return of the Symptoms : Whence a Consumption.

895. If therefore we know by the Signs of (892, 893.) that the inflamed Part is imposthumating, the place where the Pain was, being carefully noted, must be pierced with Caustics, and an Incision made about as deep as the Pleura, and kept open with suppurating Medicines, that the
Matter

Matter being thrown and turn'd toward the outside by the power of the Lungs may leave the Pleura whole, and so an Empyema be prevented: Then ought the place to be asswaged till it be entirely cleansed.

896. But if from the Signs of (302. 894.) it is plain that the Imposthume is broke inwardly, and the Pus has already form'd an Empyema, Then ought the Chest forthwith to be opened (303.) N^o. 5.) the Matter to be let out (303.) and the Wound to be heal'd up again by means of a good Diet and useful Medicines.

897. It also changeth into another Disease, when the affected Part is grown schirrous or callous, or if the Lungs adhere to the Pleura; which when it happens, there ariseth an Asthma, difficulty of Breathing, a dry Cough, chiefly after Meals and Motion; From which Symptoms it is known to be the Case, if they are present without the Signs of an Imposthume (893.) or an Empyema (896.) and chiefly if they last long without any considerable alteration for the worse.

898. When this is known to be (897.) it is either altogether incurable, or can only be removed by a laborious and hard Life in a free, open Country Air, and hard Riding continued long, and frequently used.

899. This sort of Inflammation also changes into a Gangrene first of the Side, but soon after of the Lungs themselves, because of their neighbourhood (844.)

900. Which evil proceeds either from the Violence of the Pleuresie, or the sharp or putrified concomitant Matter.

901. That this will be, or is even begun, may be foreseen from many Signs; if the purulent Spittle be somewhat tainted with Choler, round, purulent with some streaks of Blood, black and footy, like Lees of Oyl, stinking; If there be a great rattling in the Chest with a sad Countenance, the Eyes red and yellowish, with seeming dust in 'em, and dim; If the Spittle be in the beginning of divers colours; then do they often die on the third or the fifth Day. If the Patient Snoars much in his Sleep, Spits nothing or with difficulty, the Pulse be languid, the Urine extremely high-colour'd: If there be a Looseness with watry, stinking, rotten Stools, and it be Symptomatic, not critical nor easing: If a violent Inflammation of the Lungs comes at the back of it: If a Relapse of the Pleuresie: If the Blood coming out of the Vein appears very florid without the inflammatory Crust notwithstanding its discharge through a large Orifice, flowing briskly and received in a clean Porringer: If Spitting be suppressed leaving the difficulty of breathing behind, and that even increased with a pain and heaviness in the Chest, a hard, small, quick Pulse and a great heat; all which being grown much worse on the fifth Day do kill on the seventh: If the Urine is very red, dark, with a settling of mixed and various Colours, and not entirely separating at the Bottom or the Sides, that kills within fourteen Days: If the Sediment be black or broke into small particles like Bran, the Patient dies sooner: If the Pleuresie is gentle in the beginning, but grows worse on the fifth or sixth

sixth Day, the Danger is great on the seventh and twelfth Day, and they seldom do well unless they can overcome the struggles of the fourteenth Day. If the Back, Sides, Shoulders are heated with a Redness and a great Anguish, green loose Stools and very stinking; If the Pleuresie be a *dry one*, because of the want of Strength, because of the greatness of the Pain, of the unfitness of the matter for an Expulsion, because of the too great contraction and shrivelling of the Vessels, because of the too great use of hot Means, and the Pain at the same time doth rise up higher: If the Tongue is from the beginning dry, foul, livid, black, with a black Blyster or Pustule upon it; If any one of these Signs be present singly or more of them together, the Disease is most times Mortal of it self, not easie to be cured, but most times kills by a Gangrene of the Side, or of the Lungs situated just near it.

902. But when from those Signs it is plain that this Evil is already impending, the Physician ought boldly to try immediately all the most powerful Means, not relying upon the strength of Nature, nor common gentle Means, it is no matter how low he brings him, if he but saves him.

903. In this Case therefore the Physician ought immediately to burn the affected Part to the quick with a red-hot Iron, and the Crufts ought afterwards to be cover'd over with strong Cleansers, and often be heated and constantly kept warm, with the most penetrant Fomentations; And the Patient ought besides to take inwardly Strong diluters, Openers, such things as are contrary to putrefactions

trifactions and sweating Medicines in great Quantities. For these things, if any, will allay the fierceness of the Disease.

904. But if the Cause of the Inflammation be the most violent, and has created the highest Symptoms incident to Pleuresies, which give way neither to the Helps of Nature (887, 888.) nor to any Remedies useful in Pleuresies (890. 903.) and that the same be afterwards suddenly removed without any Cause, (as they did depend from the Nature of Inflammation) the Pulse continuing small, quick, and intermitting; The Breathing also quick and small, with cold Sweats; It is then apparent and certain, that a Gangrene has already laid hold of the inflamed Parts, Hence you must soon expect the Patient to grow delirious, and then shortly to die, chiefly if at the same time the outside of the Chest be of a livid Colour from the stagnating of the Blood in the Capillary Vessels: Which is also the Event, when he that spits a bilious or yellowish Spittle, is eased of his pain without any reason; for then also soon appears a mortal Delirium, the Messenger of Death, occasion'd by a Gangrene.

905. A Pleuresie terminates also into Death, when its Causes are so powerful that the Pain, suppressing entirely the Motion of the Chest, soon creates a mortal Peripneumony, destroying very suddenly by hindring all passage of the Blood through the Lungs.

906. Hence it is easie understood, Why a Peripneumony never fails of succeeding a most violent and fierce Pleuresie? Why that is generally mortal

mortal to old People, Women with Child, or in Childbed? Why the girding of the Thorax with a Bandage doth relieve Pain so much in this case, as even to make the Disease supportable? NB. "I have had just at this time the good fortune to save the Wife of an Apothecary in Deanstreet Sobo, who had a Pleuresie just before she was brought to Bed, which continued for several Days after her Delivery; the Matter whereof was twice translated, first towards the Liver, and afterwards with greater violence than ever to the opposite side of the Chest and the Shoulder (See 888. N^o. 5.) when she was brought so low by one necessary Bleeding, that every body expected her Death suddenly, but yet by successful Means has recovered to my own surprize and every bodies else, and even without any apparent danger of a Consumption, or any other Disease.

Of the Paraphrenitis.

907. If a Disease like to a Pleuresie doth invade that part of the Membrane of the Chest (the Pleura,) which doth surround the Diaphragm or the Midriff it self, there ariseth a most stupendous Disease call'd *Paraphrenitis*.

908. Which is more common than is generally believ'd, though it be seldom discover'd when present, is neglected, or is treated by some other Name.

909. It is known from a most acute continual Fever; an intolerable inflammatory pain of the Part, because of its very nervous Membranes; which

which pain is horribly increased upon Breathing, Coughing, Sneezing, Fulness of the Stomach, Nauseating, Vomiting, the pressing of the Belly upon going to Stool or making Water; whence the Patient draws his Breath on high, small, quick, almost with a Suffocation, the Belly not moving but only the Chest; he is perpetually Light-headed, his Hypochondria are lifted up and drawn inwardly, he has a convulsive Laughter, Convulsions in other Parts, he grows furious, and the Part Gangrenes. *NB.* " Under this head of " Convulsions, we must rank a most obstinate " and painful Hiccough which is peculiar to " this Case.

910. The Event is the same as in a Pleuresie (884. 892. 896. 897. 899.) but, because of the great and constant motion of the part, of its necessity to Life, of the nervousness of its extended Membranes, all things are quicker and more fatal; And from hence a large Collection of purulent Matter in the Abdomen, not unlike an Ascites.

911. The Cure therefore doth require the same Distinctions and Cautions, and do almost all the same Remedies, excepting such as the Situation of the Part doth not admit of. Emollient Glysters are often very beneficial because of the neighbourhood of the Parts, performing as it were the office and supplying the room of Fomentations and Bathing.

912. But when the Diaphragm is imposthumated after its preceeding Inflammation, if the Imposthume breaks on the side of the Belly and empties

empties its Matter therein, there happens a Gathering thereof in the Abdomen, a heaping up of the same, a Putrification, Tumor, a corrosion of the Bowels, a very bad sort of Consumption and Death.

913. And this Evil is incurable in all its Circumstances, though the Nature and Cause of it be very well understood.

Of the Inflammation of the Liver, and the several Sorts of Jaundices.

914. As other Bowels and the Parts we have been treating of, so is the *Liver* likewise capable of Inflammations; though it is seldom thought of, and perhaps is not so frequent because of the smallness of the hepatic Artery, and the weak motion of the Blood in the *Vena Porta*.

915. Its Seat therefore is in the Extremities of both the just mentioned Vessels (914.) which carry the Blood into the Body of the Liver after the manner of all other Arteries, and with the same effect; so that this Inflammation of the Liver, as well as that of the Lungs, is twofold as to its Seat and Origin; but yet so that the one soon produces the other.

916. Both sort is preceeded by the like Causes; to wit, the general Causes of all Inflammations directed chiefly to these Parts; then some as these Parts are most disposed to receive, which are many, and such as follow; The great fatness of the Caul, the atrabilious temper of the Blood and Choler; The Acrimony of a somewhere stagnating purulent, ichorous or scorbutic Matter:
If

If to these are added a Heat, Fever, Motion, Diet, Remedy, or Venom, which do melt, move, and direct them towards the Liver; a fat sharp, adust bilis put in a violent motion by its proper Causes; Stones, chalky Matter, a Schirrus, a Callus, Steatom, Imposthume, Cancer, or Worms besetting, pressing or squeezing some part of the Liver, of the Gall-bladder, or the passage of the bilis, if any one of the forementioned Causes doth awake and stir them; A sudden perception of a great Coldness upon the Liver (after its being very much heated) proceeding either from the Air, Drink or Swimming in cold Water; A long continued Thirst during a great Motion, heat and sweating; A burning Fever with a denial or want of Aliments and Drink: Great and violent perturbations and hurries of the Mind; Great Commotions occasioned by Vomits; And Diseases of the Hypochondria of a long standing.

917. Inflammations produced by so many different Causes have also many different Effects, according to the various preceeding disposition in the Liver it self, and the variety of the moved and inflamed Matter: And lastly, according to the difference of the Cause which drives 'em all on.

918. But whilst it follows the common Course of Inflammations, it obstructs the small Vessels, stops the Fluids, raises a Tumor, presses upon the adjacent Parts, and there occasions the same disorders as in its own Body; Then it gradually enlargeth, occupieth almost the whole Liver, offends the Stomach and suffers pain from its fullness, and so doth the Midriff; it hinders the in-
flux

Flux of the Blood from the Coeliac and both the Mesenteric Arteries, and stops it just at the going in to the Liver; and consequently hinders all the venous, arterious, and lymphatic Liquids wholly from flowing into the first Bowels of the Abdomen; It destroys and inverts the Generation, Secretion, Excretion, Circulation and office of the Bilis; Produces a Jaundice and its Effects; a Putrification of all the Liquids and Bowels of the Abdomen: Whence innumerable Evils.

919. This also terminates either into Health, other Diseases, or Death.

920. It terminates into Health, either by the help of kind Nature, or skilful Physicians.

921. By the help of Nature either by Means of a kind and gentle Resolution, or the Coction, and then the Excretion of the Morbific Matter.

922. By a Resolution, if the Matter be recent, soft, and the other conditions of (386.) be present; then doth Art assist this Work of Nature with diluting, solving, gently moving by Epithema's, Drinks and Glysters.

923. By a Concoction and Excretion, whilst in this Disease, known by its proper (916, 917, 918.) Signs, 1°. The Patient is somewhat Loose and his Stools are yellow (from the voided Choler) and a little tainted with Blood before the fourth day. 2°. When he makes a great deal of Urine, which is sharp, thick, red with a whitish Sediment, long thus continued before the fourth day. 3°. When a lesser Pain invades the Spleen before the Signs of the Liver's imposthumating. 4°. When he falls a Bleeding a great Quantity out of the right Nostril.

Nostril. 5°. When he falls into Sweats, which the Physician has reason to think beneficial from the Nature of their Matter, Place, Time, Continuation and their Effects.

924. When the first (923.) appears, those things ought to be administred, which are able to dilute, resolve, move, cleanse, gently to expell and chiefly are able to resist a bilious Putrifaction and to conquer, whether in the form of Epithema's, Glysters, Fomentation, Drinks, Aliments or Medicines.

925. If it be as in (923. N°. 2.) You must use those Means of (889.) which were said to cure the Case as in (888. N°. 2.) adding to them some Ingredients of a soapy and deterfive Faculty.

926. In the third Case, do the same things as in (924, 925.) but at the same time apply Fomentations of the same Nature all the way from the Liver to the Spleen, and upon the Spleen it self.

927. In the fourth Case, foment the Nostrills outwardly and inwardly with some emollient lukewarm Liquid, to encourage Bleeding till the Symptoms are eased; but then, if it continues to flow in too great a quantity, it ought to be stopp'd gradually with Stiptics and a cool Diet; but take care not to be too hasty.

928. In the fifth and last Case, supply the Patient with large Quantities of diluting Apozems, which at the same time be gently cleansing and abstergent.

929. And all along while you are doing some or all that is set down from (924. to 929.) take a conti-

continual Care, that nothing of the morbidic Matter remain in the Part affected, for that creates afterwards almost insuperable Difficulties. And thus have we seen, how the first kind of Jaundice, which is also the mildest may be cured.

930. If the Inflammation of the Liver be recent, violent, and without the Signs and hope of (922, 923.) it ought to be treated with the same Cautions by the same Remedies and Method as a Pleuresie, Paraphrenitis and such like Diseases; But that the cooling Emollient and gently loosening Apozemes drank or injected are in this Case of an admirable use.

931. The Signs of Health being entirely restored are, when all yellowness is entirely gone out of the Eyes, Face, Urine, and Stools, and the Symptoms of (918.) have ceased.

932. Whence are known the Origine, Nature, Effects and the Cure of the second sort of Jaundice worse than the former.

933. But if in the Inflammation of the Liver (914, 915.) the Remedies of (922. to 931.) are not, or too late, or in vain applied; the Cause be greater and more vehement; Then will follow an Imposthumation of the Liver (387. 402.) like unto others; but that here seldom a good Pus can be expected but in the small and outside Parts, the inside being very full of Blood and bilous stagnating Matter; So that most times follows a most fatal Putrifaction of that noble Entrail.

934. This is foreseen, 1°. From the Signs of a precedent Inflammation of this Part, an inflammatory Pain, a Yellow Jaundice shewing it self
in

in the Eyes, Skin, Urine and Stools, an acute Fever. 2°. From the absence of a Resolution, (922.) of an Excretion of the concocted Matter, (923.) or of a Cure (924. to 933.) 3°. From the Change of Symptoms, the Abating of the acute Pain, a Throbbing succeeding thereon, the Jaundice remaining, wandring and uncertain Shiverings. 4°. From the Inflammation, which was not of the very worst sort, lasting more than three days.

935. We know the same to be made already, 1°. From the Signs of (934.) having preceeded. 2°. The apparent Tumor of the place. 3°. The Change of Symptoms, so that instead of pain, the Part now feels heavy, and the Jaundice remaining. 4°. The great weakness, a little Hectic Fever, and a great Drought.

936. This Imposthume either, 1°. doth eat through the whole Liver; 2°. Or breaks into the Cavity of the Abdomen, and lets out its foul and sanious Matter; 3°. Or through the bilious Vessels into the Guts, 4°. or through the Vena Cava into the Blood, 5°. Or by raising a Tumor grows to the Peritoneum, and forms there an outward Imposthume of the Liver, to be discern'd there.

937. When the Liver is consuming, after a long struggle, with a slow Icteric wasting, with a continual small Fever, an intolerable Thirst, prodigious Weakness, an unexpressible Anguish, the Urine almost black, a Tympany, a Looseness with sanious and very foetid Stools, he dieth.

938. Which Case, when come to this pass, doth admit of no Cure, and hardly of any Pallia-

Palliation : And this is another sort of Jaundice.

939. If there be *Ulcers made* in the Liver and that breaking they have already shed their Matter into the Cavity of the Abdomen, they continually increase there the quantity of Pus, they convert all the Liquids and the Nourishments of the Body into new Pus, putrifie all the Entrails, and thence create an Ascites in the deceitful shape of a Tympany, whence follows Death after a slow and most cruel Wasting and its Symptoms : This Case is almost like the foregoing in (938.) and this Jaundice is curable by no manner of Means.

940. But as often as the suppurated Matter and Ichor, after having eat through the Ends of the bilious Ducts, doth flow into their greater Receptacles, and thence into the Intestines, according to the different way they take, they produce either fætid Vomitings of putrified, purulent, ichorous, white, ash-colour'd, tawny, yellow, and black Matter, or Stools of the like Nature, with the greatest loss of strength, which go by the Name of Colliquative loose Stools, and do kill in a small time. This is yet another sort of Jaundice, much to be apprehended.

941. But if these Matters and Liquids do throw themselves through the consumed extremities of the Vena Cava into the same, and from thence into the whole mass of Blood and mix therewith, there arise the most dreadful and soon destructive Symptoms; frequent and most frightful Swoonings, extream Weaknesses; the Pulse disorder'd all manner of Ways; a Disturbance and Confu-

sion of all the Functions at once, a sudden and unexpected Death. This is still another and different sort of Jaundice.

942. In which Case no sort of Method or Medicines will avail any thing; but a large supply of such as do support Strength, resist Putrefaction, and restore the lost Liquids, all these help a little.

943. But if it be the last sort of Imposthumations (936. N^o. 5.) then ought the Tumour well marked out to be open'd with the burning of Flax upon it (as the Antients commonly did) "or with a burning Iron (or Sticks burnt at the
"Ends as they yet practise in *Africa* by the re-
"port of Travellers) or with Caustics; The Wound then ought to be consumed with gentle Corrosives and suppurant Applications until it has penetrated into the very Bag or Vomica which is in the Body of the Liver.

944. If then the Pus, which comes out, be white, even, smooth, void of any Smell, not colouring the Probe, there is hopes of a Cure: It ought then to be treated as an Ulcer (402. to 413.) giving at the same time cleansing internal Medicines.

945. But if the same be yellow, tawny, livid, black, fetid, colouring the Probe with a sort of Rainbow Colours, sanious, and like unto a filthy Jeeish Ichor; the Liver will be eaten through by Degrees, the Patient be consumed, and almost the same Symptoms will succeed as in (491.)

946. And again if after an Inflammation of the Liver the Circumstances be as in (392.) A Schir-

rus will grow there; which by its Tumour, hardness and continual increase, doth incommode and hurt not only its own Seat but also the adjacent Parts; hence are again produced almost all the same Evils as in (881, 882, 883.) but slower; It doth not give way to softning Medicines, and sharp ones do soon convert it into a most horrid Cancer, whereof the terrible Effects are easily understood from (499.) compared with this affected place: The chief Effect of such a Schirrus is a perpetual Jaundice.

947. So that it is plain, that this Evil, when known by its proper Signs, ought to be treated with the most gentle and slow Means, and that the same is scarce ever cured.

948. But if only a slight Inflammation has been in a small part of the Liver, it will produce there a Stone, a small Schirrus, a large Pustule, a small Imposthume; which of themselves will cause a small, but upon the approach of a Fever, many and great Evils (881.)

949. Lastly, an Inflammation of the Liver doth likewise terminate in Death, if the Causes of Inflammation are so violent, that nothing can pass through the Liver, and a very high Fever doth rage at the same time: for then is the whole stiff all about the circumference and extremities of the Lobes and Vessels, and much dilated about the larger Vessels, so that it cannot perform any of its Functions; there breaks out a great and sudden Jaundice, the Vessels break, the Blood and Choler are shed, and the Patient thereupon instantly dies. This event is foretold, 1°. From the known

violence of the Disease in the Liver. 2°. From a sudden and utter loss of Strength. But its presence is known from the vomiting, or voiding by stool Blood, Choler, Excrements like lees of Oyl, green, black, very stinking, and even like unto the smell of dead Bodies : A violent, continual Hiccough ; a Fever of the highest, an unquenchable Thirst, and a very sudden Paleness.

950. From all these explain'd, since (914. to 950.) may be understood numberless Symptoms, occurring in acute Diseases ; whose Reasons being unknown, have given birth to all the idle Tales about *the Malignancy in Diseases* : for from the Liver do depend all the Bowels of the Abdomen, and consequently all their Actions, of Digestion, Assimilation, Nutrition, supplying the Blood with new Fuel, and the Alvine Excretion. In the Liver are three sorts of Liquors all easily rotting upon the accession of heat, much Blood and that loose : The Choler of the Gall-bladder, and the Choler of the Liver, emptying it self through a particular and distinct Passage from t'other : The Liver is very near situated to the Diaphragm and the Heart : When the Extremities of the bilious Vessels are obstructed, then doth the bilious Liquor of the several branches of the Vena Portæ pass over into the Vena Cava. And from this alone it is easie to conceive how many and different sorts of Jaundices are apt to arise. Why it is sometimes easily cured and when ? Why it proves at other times so obstinate ? Why it sometimes kills soon, and sometimes late ? Why it comes and goes, and returns again by fits ? Why it appears,

pers, rests, and returns with such great Anguishes, Vomiting, Pain and Convulsions? and what it then doth mean and indicate? Why it is so calamitous in acute Fevers before the seventh Day? Why so very insuperable in the same Fevers after the seventh Day? Why upon the coming of a large Bloody-flux by Stool, which however doth not continue long, the same is so thoroughly cured? Why letting of Blood doth so little profit in those Diseases? Why in all acute Distempers a Physitian ought always to have a great Regard to, and a constant Eye upon the Pains of the Hypochondria, their Tumors and their Liftings upwards and inwards at the same time? Why the presence and absence of the Jaundice be so suddenly known from the Eyes, and Urine? Why the inflammatory, suppuratory, gangrenous, schirrous, cancrus Diseases of the Spleen, Stomach, Caul, Mesentery, and Intestines do always at the same time violently affect the Liver. Why also the Inflammatory and Schirrous Diseases of the Liver do in their turn infest them? Why the Liver can swell to so prodigious a bulk, and afterwards be even dried up? Why a Dropsie proceeds from defects of the Liver, and the Tympany a worse afflicting Disease than the former? Why Dropsical people waste away, their Liver is dried up, and on the contrary the Spleen swell'd much? Which is the Bloody-flux proceeding from the very Liver, &c? for there are innumerable things belonging to this place, and to be resolved by what has been said.

Of the Inflammation of the Stomach.

951. As other Parts, so can likewise the Stomach be seized with a true Inflammation : whereof the Signs and Effects are pretty near, as follows ; a burning, fixed and pungent Pain settles in the very Stomach ; it grows fiercer at the very moment that any thing is swallowed down into it, and the Patient vomits up every thing with the utmost violent Strainings, and a very painful Hicough ; he is in a terrible and uninterrupted anguish about the Vitals, and has an acute continual Fever. Its Causes are those of all Inflammations in general or the neighbourhood to some other thus affected Part, or some sharp corrosive Matters that have been swallowed.

952. It most times becomes Mortal in a short time, unless it be suddenly cured, because of the Necessity of the Part, and its having several tissues of Nerves.

953. It uses to terminate like all other Inflammatory Diseases into Health, suppurating, schirrous, cancerous, gangrenous Distempers, or into sudden Death it self, which is hasten'd by Convulsions.

954. As soon as it is known present by its Signs, it ought to be relieved and the Cure attempted by Bleeding immediately, largely, and if need be, repeatedly : by the softest, emollient Diet and Medicines contrary to Inflammations, and to the immediate Cause thereof in this Case ; by Glysters, Fomentations, and other outward Applications of the like Kind. Above all things abstain from giving a Vomit, or allowing any Juices that have any degree of sharpness in them.

955. If

955. If it terminates into an Imposthume, there follow many Evils, chiefly a Nauseating, Vomiting and Pain; which to the ignorant of the Cause pass for very strange and wonderful Phenomena: Which Causes, when known, require the same Cure as other Imposthumes. (See 402. to 413.)

956. When it creates a Schirrus, or a Cancer, then are occasion'd the most enormous Vomittings, intolerable Pains, increased upon the swallowing of every little matter, fixed, long continued and always worse upon the assuming of any sharp Medicines. " Forbear therefore the too common
" Mixture of *Sal. Absinth. Succ. Limon. Aq. Mentk. &c.* which every pretender to Physick
" doth administer without any distinction; but
" let the *Succus Thebaicus* be your all, moderating your Doses according to the degree and
" circumstances of the several Symptoms.

957. It is asswaged only with soft Medicines proper to these Diseases. (See 490, 491. 506. to 511.) it is rarely cured: " In this case chiefly are
" profitable the famous Waters, of *Bath, Aix la Chapelle, Bourbon, Aix in Provence, &c.*

958. The Origine, Nature, and Effects of the Inflammation, Imposthumation, Gangrene, Schirrus and Cancer, of the Spleen, Pancreas and Caul, are known, foreseen, cured or palliated from and with the same as have been said from (914. to 958.)

Of the Inflammation of the Guts.

959. The Intestines, chiefly the thin Guts, are very often seized with the like acute Inflammation

in their Membranes as the Stomach, from Causes common to all Inflammations carried thither ; or from the matter of sharp Drink, Aliments, high Sauces, Medicines or Poisons reaching those Parts, detain'd in the Foldings of the Valvules and sticking to them ; And also from a sharp, putrid, and fetid purulent, ichorous, gangrenous, bilious, and atrabiliar Matter convey'd hither from the Gullet, Stomach, Liver, Spleen, Pancreas, and Caul, which sticks also to them and gnaws them ; Or lastly, from some strong preceding Convulsion, occasioning Flatulles, stopping the Motion, and thereby creating an Inflammation.

960. When created in those Parts, it contracts the Guts, shuts up the Cavity, hinders the Passage of what presents it self, and occasions a very sharp, burning, fixed pain ; Violent Convulsions when irritated by the Matter that is near and upon the affected Part ; It stops the passage by Stool ; excites a Vomiting of what is then taken, or approaches the Part, and that sooner or later after taking, according as its Seat is higher or lower ; It creates painful Winds, most sharp gripping Pains, with great murmurings in the Guts, the Iliac Passion, twisting of the Guts, an Imposthume, Gangrene, Schirrus, Cancer ; a very acute Fever, a very great Weakness from the fierceness of the Pain, and a very sudden Death.

961. As long as it continues within the terms of an Inflammation, it imposes on the unwary, under the Name of the Iliac Passion, who adscribe the Cause of it to a cold Flatus, or Wind, to the great detriment of the Patient, for they attempt

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the cure with hot Things, and such as from their pretended *power of Charming*, have retain'd the Name of *Carminatives*, the event whereof is generally Fatal.

962. But it may easily be known to be a true Inflammation by its Companion, a very acute continual Fever, a great Drought, great Heat, a hard Pulse, a burning fiery Pain, a very high-colour'd Urine, and a sudden Weakness.

963. If the same doth occupy the tract of the *Gut Colon*, it occasions that pain, which is called *the Cholick*; if it seizes the lower end of the *Intestinum Rectum*, then it commonly passes for a Fit of the Blind or inward Piles: It goes off with a kind Dyfentery, the Excrements being somewhat bloody and bilious.

964. As soon as it is known present by its Signs (959, 960.) then ought the Cure to be attempted forthwith with all the most powerful Means whilst it is yet in this first state; Which is obtained, 1°. By a large and repeated Bleeding as in the *Pleuresie* (890.) 2°. By the continual injecting of loosening, diluting, antiphlogistic Glysters repeated often to three or four or more times in a Day. 3°. By the drinking incessantly things of the same kind, mixing Opiats with a due Caution; and also such things as are known to be contrary to the particular or singular Cause of the Disease (959.) 4°. By Fomentations of the like kind applied all over the Belly, and chiefly the Application of young, live, hot and sound Animals; such as Puppies or Kittens. 5°. And in the mean time prudently forbearing
the

the use of any sharp things, or such as increase the Motion of the Blood, as are heating, whether Aliments, Drink, Medicines, Motion or Passions. 6°. Continuing in the Use of those, till the whole Evil be appeased, and doth not return in three Days after it.

965. If this Evil having preceeded (959, 960.) and not having been removed by proper Means, and continuing still with the same obstinacy longer than three Days, in the room of pain, burning, and tearing, there has succeeded an uncertain and wavering shivering all over the Body without a manifest Cause, an obtuse pain in the Part, together with a Heaviness of the same, it will be a Sign that an Imposthume is forming there; out of which there will flow Pus within a Fourthnight upon its breaking; if it falls into the Cavity of the Abdomen, it creates many ills like unto those of (939.) But if it flows in the Inside and through the Tracts of the Guts, it causes a purulent Dysentery, which is great or small, of a long or short continuance, according to the nature of the Ulcer there; hence are often the whole glandular Membranes voided, and Consumptions might hence arise.

966. As soon as that is known to be the Case, you must immediately forbear giving any such Diet whence many hard, thick or sharp Excrements may be separated; the Patient is to be fed only with Broths, with gentle cleansing Roots boyl'd therein; Balsamic and detergent Decoctions are to be drank in great Quantities, or given in Glysters; or medicated Waters must be drank in great Quantities;

ties; and these things must be continued till the Cure is perfected.

967. But if the Disease has had very violent Causes (959.) and has produced the most cruel Symptoms of (960.) it may easily produce a Gangrene in that Part (388.) which doth afterwards fill with very great Sufferings.

968. Which to be approaching we may easily foresee by observing the same things already laid down, if at the same time there be no Signs of a kind Resolution (963.) or of a Cure (964.)

969. That the same is already present we know if we have already observed what was said just now, and if there be a sudden, and causeless remission of the most bitter Pain, while the Pulse remains weak, intermitting; Cold Sweats appear; and there is a Dysentery which voids foetid, ash-colour'd, ichorous, livid, and black Excrements and Skins, without any sense of the Patient; Whence we see very soon an easie kind of Death.

970. This Evil when thus far advanced, doth seldom admit of a Cure; it ought to be cured sooner; but if any thing is capable of doing good it is only the Method of (966.)

971. But if the Causes of (392.) have produced a Schirrus here, there grows an Illness of quite a different Nature, which we must endeavour to put in a true Light, and to understand thoroughly.

972. If therefore an Inflammation lays hold of the Intestines (959. 963.) with the circumstances of (392.) and lasts long without raising to the highest pitch of fierceness (960.) and is not con-

conquered either by a Resolution, or Medicines, nor an Imposthumation; and then hath left in the part a numbness, heaviness, a pulling, all which do continue, the Physician ought to think that a Schirrus is growing there.

973. Which following its own Nature (392.) and producing its proper (486.) Effects in this place, must needs create many great and obstinate Evils, as are chiefly, the numbness, weight, and bulk continually increasing; Hence the Cavity of the Gut made narrower; a Stagnation there of the Chyle and the Fæces; an Action and working of those against the resisting place, their growing putrid from their being detain'd; hence at last an entire shutting up of the Gut and its winding; a Staying of all the gross Parts of the Aliments, &c. The Iliac Passion, Miserere, or from the sharp irritating fæces a dry sort of Dysentery; Convulsions, Hiccoughs, Vomitings, continual Pains, a Fever, a Leanness, Wasting, and Death.

974. Remedies of any kind are but of little profit here. The Diet ought to be as in (966.) And thus it may be bore long without any great Sufferings.

975. But if this Schirrus grown here and produced by the Causes of (492. 495.) is known by the Signs of (497, 498.) then is it a most calamitous Case and altogether incurable; which may be known from (498.) compar'd with the Nature, Function, and the nervous Texture of the Gut: But chiefly a continual Dysentery, a very sharp one, not giving way to any Medicines, burning, corroding, consuming, with most sharp Convulsions,

sions, Pains greater than what the most patient can endure, and them fixed and long continued, till at last Death is wish'd for, and call'd upon as the only relief for those Miseries.

976. If as soon as this Schirrus is known to be present (972.) it be treated after the Method of (974.) The Calamities of (975.) are in a great measure prevented. But if to overcome and cure the same there be imprudently made use of sharp Remedies (490. N°. 3. 495. 502.) and chiefly of strong Purges, a Cancer will certainly grow and rage there. For then his Drink ought only to be of Milk-whey, his Diet of meally Broths, or made of Flesh only with Yolks of Eggs: Let Glysters be injected made of the Decoctions of only Lynseed, or the Leaves of the woody Nightshade, or the Seeds and Heads of Poppies; The Medicines be of the most softning Anodyne, gentle Opiats, and such as do not easily turn either fower or sharp.

977. Hence doth it at last appear, Why Physicians meet so frequently in their Practice such cruel, fixed, obstinate, intolerable and incurable pains of the Gullet, the upper orifice of the Stomach, Liver, Spleen, Pancreas, of the thin Guts, and of the Colon? And also how many sorts of Bloody-Fluxes which are wonderful in all respects? How ill-grounded People often are, when in these Diseases they accuse a peculiar sort of a Hectic Acrimony, and according to this erroneous Notion, often give quite contrary and pernicious Medicines? How prudent a Physician ought always to be, when in these Diseases he goes about to

to prescribe Purges? And why often upon the same wrongly and untimely given, there follows a terrible and most-times insuperable Over-purging or Hypercatharsis? How many different Methods and Remedies are required to cure the several sorts of Dysenteries? How foolish, deceitful, and pernicious therefore the Boastings be of some People, to cry up one particular Medicine, though never so excellent, as an infallible Specific against that Disease? or even one general Method? And a bundance more Consequences besides. NB. "Dr. Boerhave has most certainly in his View here "Dr. Helvetius of Paris, who has imposed much "on the World with the *Indian Vomit*, crying "it up as an ever infallible Remedy in Bloody "Fluxes, by which he in a little time did "get very considerable Sums of the Credulous. " * And as he has very good Intelligence from "London, I am affraid that he has in his Eye at "the same time an otherways worthy *North-British* Physician, at whom I have often wondered how he cou'd make himself so little as "to carry about his infallible Electuary, when "he has Merit enough otherways to make himself commendable.

Of the Thrush.

978. But as in many acute Diseases where the Bowels are inflamed, the Thrush doth not a little rage and perplex, it will not be improper to treat of it in a few Lines.

979. Which in reality is nothing else than an accumulation of small, round, superficial Ulcers which beset the inside of the Mouth.

980. Which being examined with Judgment, seem to be Exulcerations of the extream Emissaries by which the Spittle, and the oily mucous Liquor is separated and pour'd out into the Mouth, occasion'd there by the shutting up of that Canal with a slimy and tough Humor that has been convey'd thither.

981. So that they occupy all those Places, where the like Emissaries unload themselves; that is, the Lips, Gums, the inside of the Cheeks, Tongue, Palate, Jaws, Tonsils, Uvula, Gullet, Stomach, and thinner Guts; and they are much of the same Nature, and produce the same Effects in all those Parts.

982. They mostly and often invade the Northern Nations, that inhabit Fenns and Lowlands, in warm, rainy Weather; they are very fatal to Children and Old Age.

983. Before the Thrush shews it self in the Mouth, there has usually preceeded a continual putrid Fever; or an Intermitting one turn'd into a Continual; beginning with a Diarrhæa or Dysentery; a great and continual Nauseating, Vomiting, loss of Appetite, great Anguishes coming on frequently with a great Pressure, and like a cross barr about the Vitals; a great Weakness; a great evacuation of all sorts of Humors; a Numbness and Dulness; a slight, unsettled, continual Slumbering, a continual complaint of a heaviness and pain about the Stomach.

984. There useth sometimes to appear here and there a single Pustule, sometimes first upon the Tongue, or in the corners of the Mouth, in the Jaws

Jaws or elsewhere, without any constant choice of the Place at the beginning; And this sort of Thrush is always a kind one: Sometimes it appears very deep down the Jaws with a white Crust, seeming to climb upward from the Gullet; which Crust is thick, shining like fresh Lard, sticking very fast and mounting slowly: This is the worst Sort which most times doth kill: Sometimes it occupies the whole Cavity and inside of the Mouth, even to the further out-parts of the Lips, with hard, thick, close, and very sticking Crusts; covering all these Parts over in one continued Body: And of this Sort very few do escape.

985. These Ulcers (979.) are of different Colours: Of a pellucid White like Pearls; An entire White from their great thickness; tawny, yellow, livid, black; the Malignancy whereof increases in this same Order as the Colours have been set down, so that the first be the kindest, and the last the most destructive of all.

986. When they have stuck some time, they use to grow loose at the lower Parts, to give way, to fall by piece-meals; so that all the Parts are gradually and successively freed of 'em. Some fall off quickly, others slowly. Some grow on afresh, suddenly, some slowly, some not at all. Sometimes they return as thick and close as the former, and sometimes even closer: From these several Appearances judge again of the order and degrees of Danger.

987. So that their Place (981.) Nature (987. 980.) Cause (980. 983.) and Symptoms (984.

to 987.) do give us sufficient Light into the different Nature of this Illness: And from thence we may also rightly foresee what their several Effects and Consequences must be.

988. For when such an Aphthous Crust doth cover over the whole surface of the Parts described in (981.) it takes away all feeling and sensation which ought to strike the Nerves, whence the Patient cannot possibly taste any Thing; It hinders the egress of the Liquids through their Emissaries, whence a dryness, a dilating of the Vessels underneath that Crust, a putrifaction of the Liquors that stops there, and an Inflammation of the Parts themselves: It shuts up the Cavities of the absorbing Vessels (that is the Lacteals.) Whence it hinders the ingress of new Chyle, Drink, and Medicines into the Blood, produces the Defects arising from the want of Nourishment; whence at last Death it self: When the Crusts fall off, there follows a greater flux and discharge of Humours through the now dilated Vessels; whence a *perfect Salivation* (“ Which in this very Case I
“ saw continued last Summer in a young Lady,
“ my Patient, to the Quantity of above two
“ Quarts a Day, for three Weeks together,
“ which cou’d not be entirely suppress’d but after
“ many repeated Purges and gentle Adstringents to restore the Tonus both of the Vessels
“ and of the Blood.) A Looseness, which is advantageous if the Aphthous Crust do not grow afresh; but very pernicious if they do return: When the Crusts fall off, the Pain of the inflamed and now bare Parts often dropping clear Blood,
S occasion

occasion bloody Spittle or a bloody Flux; all which Effects if we apply and compare with the Nature of the Stomach, of the emissary Duct of the Liver, Pancreas and Intestines, will inform us of the infinite Evils that may ensue from this one Disease the Thrush; so that there is no occasion for any other Prognostic.

989. But if those ulcerous Crusts be very slow, thick, wide and close, then is the subjacent suffocated, inflamed, suppurated and gangrenous Flesh, changed into very illnatured Ulcers, which eat and consume the Palate sometimes to the very sheath of the Bone; and it is self-evident, what Evils it produces when this happens in the Stomach or Guts.

990. To obtain the best Cure for this Disease,
 1. The Physician ought to cause the internal Impulse of the vital Juices against and towards the affected Parts to be raised, and thus moderated, that by means of this supply of Liquid the ulcerous Crust may be resolved below, loosen'd and made to fall off; this is effected with drinking great Quantities of warm, diluting, resolving and cleansing Decoctions. And because in the bad Sorts of this Disease the Lacteals are so oppressed as not to give an easie Passage to these Liquors into the Blood, recourse must be had to Fomentations, Steams, and Bathings; the best Aliments here are Panadoes with the addition of some Wine and Honey. 2. This Crust ought to be prepared and made apt to fall off easily and quickly; which is done with Fomentations, Gargles, Glysters; which ought to be made of warm,
 loose-

loosening, emollient Deterfive Liquors; and by its sufficient stay moistning, and resisting Putrefaction. 3. As soon as the Crust is fall'n, Anodynes, softning Medicines, and such as at the same time are somewhat corroborating are forthwith to be given. 4. And as soon again as the Fever is abated, the Urine begins to separate, the Pulse is freer, then is cordial and strengthening Drink useful and profitable. 5. At the end of the Disease a warm Cordial sort of a Purge ought to be given; such as may be the *Tinctura Sacra*.

991. From this History and the Cure of the Thrush may a great many Doubts occurring in the practice of Physick be resolved. As why at the latter end of a Fever, that was attended with a Diarrhæa or Dysentery, a Thrush ensueth? Why this doth mostly happen in Children and aged People? Why mostly when in this sort of Fever from the first were ordered heating or adstringent Medicines, Dyet and Regimen? Why the Thrush may be prevented in those Fevers if a Purge be order'd before any thing else? Why in the worst sort of Thrush the Patient is afflicted with a fatal Hiccough? Why *Hippocrates* joins together the Thrush in the Mouth, a loose Belly, and loss of Appetite? Why the Thrush obfessing the whole Membrane of the Stomach doth needs occasion a Lientery (that is a Looseness by which the Chyle passes through all the Guts unalter'd?) Why the black Thrush is reputed Pestilential? Why a violent Thrush in the Mouth of Women with Child doth forebode a Miscarriage? Why in Diseases of putrid Lungs or Liver the Thrush is almost an inseparable Symptom,

tom, though flighter? Why upon the overcooling of the Thrush there follows a Tumour, a Heat, Suffocation, or a Quinsie? Why a Delirium, Tossings, constant Wakefulness and cold Sweats be such dangerous and even mortal Symptoms in the Thrush.

992. So that in a few this is the Rule to judge by: A transparent, white, thin, scatter'd, soft, falling off easily, little returning and superficial Thrush is a kind and good Sort: But on the contrary; that which is very white and solid, yellow, tawny, black, close, thick, running into one, hard, tough, continually returning and eating into the Parts, is the bad and fatal sort of Thrush.

Of the Nephritis.

993. That the Kidneys themselves are seized with a true Inflammation, we know from a burning, pungent, great and inflammatory Pain of the Place where the Kidneys are situated; from an acute continual concomitant Fever; scarcity of Urine; being often made but in very small Quantities, its being very red and flaming, or, when the Illness is in its highest Degree, very watry and limpid; a numbness of the Thigh on the affected Side; a Pain of the same Groyn and Testicles; Iliac Pains; vomiting of Choler, and continual Belchings.

994. This is produced by all the Causes of a general Inflammation directed to the Kidneys; and therefore 1°. Whatever hinders the Arteries to transmit their Liquid, a Wound, a Bruise, and

Imposthume, a Tumor, lying long upon the Back, a violent Strain of the Back, or a Stone.

2. All that hinders the Passage of Urine into the Pelvis, Ureter, or Bladder, as are most Causes just now mentioned, when applied to these Parts.

3. Such as with violence force the coarse Parts of the Blood into the Urinary Passages, as Running, long and hard Riding, great Heat, a Straining, a Plethora, sharp corrosive Diuretics and Poysons.

4. A convulsive Contraction of all the said small Vessels if long continued.

995. If the Inflammation of those Parts be in the highest Degree, they are often so very much tied up, that no Water at all can pass 'em; sometimes only a very little and that transparent, thin, watry Urine can pass, which is worst of all. The cohærent and neighbouring Nerves being often irritated, it occasions Pains and Convulsions in the Stomach, Mesentery, Guts, and Ureters; whence Belchings, a Nauseousness, Vomitings, Gripping painful Stools, the iliac Passion, stoppage of Urine, a Numbness of the Thighs and Legs, and their unmoveableness, and a Burning in the Loyns.

996. It goes off by the help of kind Nature, or the Illness it self carrying off and overcoming its Causes. 1°. By means of a Resolution. 2°. By the voiding of a great Quantity of a sad, red, thick Urine, without any interruption, and before the seventh Day of the Illness, at farthest before the Fourteenth. 3°. By the copious flowing of the Piles in the beginning of the Illness.

997. It is cured, when known by its Signs that it is an Inflammation (993. 995.) 1°. By the general Remedies apt to remove Inflammations in general, as is bleeding, withdrawing, and diluting. 2. Gentle emollient Decoctions, such as are contrary to Inflammations given in large Quantities. 3°. Glysters, Fomentations, and Baths of the same Kind. 4°. A moist, soft Diet; Rest, keeping out of a warm Featherbed, and chiefly not lying upon the Back : “ Which abundance in
 “ this Case are apt to do, because it numbs the
 “ the Parts and gives them Ease for that Time,
 “ but they pay for it afterwards with a Witness.

998. If the Pains or Convulsions be very urgent, without waiting for the Effects of other Remedies, give Opiates with due Caution.

999. A great Vomiting, here only a Symptom, will often abate and be eased upon the drinking of warm Water with some Honey.

1000. And only this Method will safely cure, even that Nephritis which is occasion'd by a Stone lodged in the Kidneys or Ureters.

1001. If the Causes of the Nephritis be violent, and the same will not be resolved (996.) nor cured (997.) but the Violence of it lasts beyond the seventh Day; then ought an Imposthume to be feared : Which we may know to be gathering, from the abatement of the Pain, its change into a Beating, from often returning Shiverings, from a heaviness and numbness of the Part : That the same is already made is known, from the just mentioned having preceeded, from a beating, heating, and stretching in the Part; from the Urine being charged

charged with Matter, being stinking and like to salt Urine that is putrified by standing: As soon as this Imposthume is known to be made, you must use at first such Things as do ripen very much and are emollient at the same time; and when afterwards the Urine appears purulent, then order your Patient the clearest diuretic Medicines, such as the Mineral-waters of *Islington*, &c. Milk-whey, and the like, not forgetting at the same time Balsamics: "Of which in my Opinion none are to be compared to Copaivy given in such a Method as to preserve the Stomach and to hinder it from purging by Stool.

1002. But if this Imposthume continues long, then doth the wholly consumed Kidney form an altogether useless Bagg; and then doth a Consumption of the Back very often ensue.

1003. If it creates a Schirrus, there follows a Palsie or a Lameness of the Limb of that Side, which is no ways curable: Whence often ensues a slow Consumption, a Dropsie, &c.

1004. But if a small Portion of the inflamed Matter be coagulated and stops in some of the smallest secretory Ducts of the Kidney, it forms there a Basis, to which any sandy Matter, contained in the Urine, hapning to stick in the Form of a Crust, forms a Stone of the Kidneys and enlarges the same. Of which hereafter.

1005. This Inflammation doth even sometimes terminate into a Gangrene, which is known from the violence of the Cause (994), of the Symptoms (995), and the not appearing Ease from the Remedies (997, and the sudden abatement of the

Pain without any Cause, with a cold Sweat, a weak and intermitting Pulse, the Hiccough, no Urine, or its being livid, black, with streaks in it like Hairs, stinking, with tawny or black Skins, a sudden and entire loss of Strength : In which Case either nothing or only the Medicine of (902.) is of use.

1006. Hence it is plain, that there are numberless Sorts and Causes of a Nephritis, and among them one which is occasioned by the Stone ; and that yet all of 'em may and ought to be cured by almost the same Method ? Why Nephritic Pains are so frequent in Fevers (993.) and its Crisis (996.)

Of the Apoplexy.

1007. The quick Event of Apoplexies, their depending often from and joyning with Inflammations, their producing many Evils, requires that we should treat of them now.

1008. Which Apoplexy is said to be present, when of a sudden, the Action of the five external and all the internal Senses is abolished together with all the voluntary Actions, and there remains only the Pulse, most times very strong, and Breathing, but difficult, great and with a Snoaring, together with an appearance of a deep and everlasting Sleep.

1009. The most accurate and often repeated Observation has taught us, that this Disease has happen'd as often as those Causes had preceeded, which have been able to cut off entirely or in a great measure the Efflux of the Animal Spirits out of their Magazine the Brain, and hindring them from

from flowing into the Organs of the Senses and of voluntary Motions ; and also their return from the said Organs into the *Sensorium commune* ; whilst there remains a free egress and probably regrefs of the cerebellous Juice into the Heart, and the natural Organs of Respiration to that degree, as is in a manner sufficient to perform the said Functions.

1010. All which Causes enumerated by the observing Physicians, and delivered to us may be reduced into some certain Classes for the ease of Practice.

1. The natural Make of the Body, as a large Head, a short Neck, and often raised but upon six Vertebres instead of seven ; a very large, big and fat Body ; a Plethoric Constitution, and an abounding pituitous Cacochymie.

2. Whatever doth alter the Blood, Lympha and Matter of the Spirits so, that they cannot freely pass through the Arteries of the Brain, but stick and fasten there : Such are often. *a.* Polypous Concretions in the carotic or vertebral Arteries, whether first grown about the Heart or bred within the Cranium itself ; which shew themselves by a palpitation of the Heart, an unequal Pulse, frequent Vertiges and dimness increased upon the increase of Motion, or Heat. *β.* An inflammatory thickness of the Blood, which is known by the presence of an acute continual Fever, a Phrensie, a violent inflammatory Pain in the Head, and by their having long continued ; then all the Signs, which arise from the Blood, which being hindered from going through the Vessels of the Brain,

Brain, fall with so much the greater Force, and in greater Quantity upon the other ramifications of the carotic Arteries, whence a Redness, a Tumour, Inflammation of the Eyes (and forced Tears in 'em) Face and Neck. γ . A thick, gluish, and pituitous sluggish Nature of the whole Mass of Blood; whence this Distemper so commonly invades old, catharrous, cold, pale, leucophlegmatic People of a moist Constitution; and it may even be foretold before its coming, if active People grow lazy or idle of a sudden, and dull, sleepy, indifferent to any Motion or Exercise, speak slower than usual; from their Tremors, Snoarings, Night-mares; a paleness, turgidness, moisture and dimness in their Eyes; their frequent vomiting of Phlegm; being giddy, breathing with difficulty upon the least Motion, with a drawing and beating of the Nostrils: All the Causes which will either produce or accumulate a sluggish Glew. (69. to 75.)

3. Whatever doth squeeze the very Arteries or nervous Vessels of the Brain, so that neither the Blood nor Spirits can flow through them. α . A Plethora, a filling Cacochymie, a very hot Constitution, hence very much prone to this Illness, chiefly if Motion or an additional great Heat have increased the Motion of the Liquids; hence it uses to befall them from over-eating, hard drinking, sharp and much moving Medicines, as are Cordials, Volatil Salts, Spirits, &c. Vomits, &c. Overheating, overwaking or working, too much thinking or too frequent and too long bending of the Mind. β . Any sort of Tumours grown in the Cranium, whether

ther inflammatory, suppuratory, ferous, pituitous, steatomatous, schirrous, ossious, or compressing the Arteries, or the meeting of the Veins near the Torcular of Herophilus, or doing the same to the Medullar beginnings of the Nerves, or the very Medulla of the Brain. γ . A too quick motion of the Blood towards the Head, while the Blood doth not circulate so freely in the Arteries below, which may proceed from numberless Causes.

“ A daily occurring one is the pressure of the full
“ Stomach, which seldom fails to make People
“ heavy to sleep from this very Cause. δ . All that doth squeeze and press the Veins which return the Blood from the Brain; as it happens to People that are hang’d, who may all be said to die of an Apoplexy. ϵ . The Effusion of Blood, Pus, Ichor, or Lympha upon the *Dura* or *Pia Mater*, and pressing them outwardly upon the Brain.

4. Whatever doth divide the Arteries, Veins, and Lymphatic Vessels of the interiour Brain near its Cavities, so that the flowing Juices being accumulated do offend by their pressure the arched Origins of the Nerves. Such are the sharp Serum in Dropfical and Leucophlegmatic; Blood in Plethoric; the bilious Acrimony in melancholic, scorbutic and gouty People; Which very common Cause occurs mostly between the Age of Forty and Sixty; all which being awaken’d and stirred up out of obscurity by their peculiar moving Causes, do often create this Disease suddenly. It may therefore be foretold from the Nature of the præ-existent Matter and the knowledge of the Causes which

which are like to put in Motion. And here are chiefly prejudicial violent Passions of the Mind, and the too great application to any sort of Business that requires much Thought.

5. Hereto belong also some Poisons, which however do operate according to the power of the three last Causes (No. 2, 3, 4.) and which rather suffocate the Lungs than hurt the Brain.

“ NB. Our Author here particularly designs the
 “ *Grotta Canina* near *Puteoli* in the Kingdom of
 “ *Naples*, the Sulphureous acid Steams whereof
 “ mounting a small space above the Ground in
 “ that particular *Dog's hole*, do suffocate such
 “ Dogs as are forcibly let down into it, but of
 “ which they recover as soon as taken out, and
 “ thrown into the Pond just opposite and near
 “ to it, &c. Of this see the Particulars in most
 Voyages to *Italy*.

1011. Those Causes we have learn'd from the Anatomical inspection and examen of such Bodies as died of Apoplexies, and the Historical Observation of such Things as are obvious to a curious Observer in the Cure of this Disease: And Reasoning doth easily range 'em in the mentioned Classes, which are very much adapted to shew the particular Method of Cure in each Case.

1012. From these 'tis manifest, that this Disease is often created by different, and sometimes even opposite Causes; and is therefore judiciously divided into a bloody and phlegmatic sort; but not so as to comprehend all other Sorts, seeing there is such, as may be called Serous, Atrabiliar, Polypous and otherways distinguish'd Apoplexies.

1013. But

1013. But the affected place in a true Apoplexy is the whole *Sensorium Commune* ; But in a slight or symptomatick one, it is only some part thereof chiefly, while the other parts are in some measure, but yet less pressed ; The Cerebellum being most times unhurt in the beginning.

1014. Whence it appears, why the Pulse beats and Breathing is preserved, while the Senses and voluntary Motions are destroy'd ? and even why the Pulse and Breathing are stronger in proportion as the Senses and Motion do decrease, and also when Death is near at hand ?

1015. The greatness of an Apoplexy therefore is measur'd by the age, constitution, and make of the Patient ; then by the violence of the Symptoms, and chiefly the entire destruction of Senses and Motions ; the Strength of Breathing with loud Snoring ; by a Quantity of tough froath about the Mouth ; a thin Sweat gathering in drops and coldish ; If this Fit be produced by a preceeding slight Fit of a Symptomatic Apoplexy ; or by a violent Epileptic Fit, or any other known violent Cause whatever.

1016. The lightness and curableness of the Illness on the contrary is measured from the slightness of the Symptoms, and the absence of what went just before.

1017. A gentle Apoplexy goes off with the coming on of Sweats, which relieve by their great quantity, continuance in an equal degree, spreading equally like a Dew and Heat ; with a large quantity of thick Urine ; with large Bleeding from the Piles for a long while ; with the Fluor
of

of the Menstrua being restor'd ; a Looseness and a high Fever.

1018. One somewhat stronger, when the Cause is overcome, doth usually change into a Palsie of some muscular Part, of one entire Side of the Body, whence it is called an *Hemiplegia*, or of all the Parts below the Neck, which is call'd a *Paraplegia*, and is seldom cured, leaving always behind a cras'd Memory, Judgment and Motion; whence they use to continue all their Life-time after sleepy, dull, trembling, giddy, and pusillanimous.

1019. But a fierce true Apoplexy (1015.) soon terminates in Death from the violent attrition of the Cerebellum, the corruption of all the Liquids, and the reaching of the Cause into the Cerebellum itself; These do seldom out-live the Seventh Day.

1020. That an Apoplexy is like to invade may be foreseen; 1. From knowing the natural Constitution (1010. N°. 1.) 2. From knowing the presence of such præ-existent Matter as will occasion it. (1010. N°. 2.) 3. From the several Occasions as will set that Matter going. 4. From the first Effects of the beginning Illness, as are a Tremor, Staggering, Vertigo, Dimness, Numbness, Sleepiness, faulty Memory, tingling noise in the Ears, a heaving and panting, a deeper Breathing than usual, with a drawing of the Nostrils inwardly; and a complaining of a heavy Weight when laid down, which is called, being *rid by the Night mare*.

1021. It is soon discover'd when present, only care ought to be taken not to confound the several Sorts.

1022. No general Rule can be laid down for the Cure of it; for that ought to vary according to the various Causes, their different way of invading, and the difference of the Place chiefly affected, and ought to be applied in the very beginning before the evil is confirm'd and encreased by time.

1023. If therefore it is foreseen that the same is to happen from a slow, sluggish, and cold Cause (1010. N^o. lett. 2. γ.) by its Signs there mention'd, Endeavours ought to be used forthwith. 1. That the pressure of the glewish Matter be drawn off from the Head. 2. That its sluggishness in the Brain, and all over the Body, be amended by attenuating Medicines.

1024. The Pressure upon the Vessels of the Brain is lessen'd. 1. By diverting the Matter into other and opposite Places. 2. By general Evacuations.

1025. The first will be obtain'd by Steams, Frotusses, Baths, Suckings, Blysters, drawing and heating Plaisters, Caustics, Issues, Setons, Frictions, Ligatures upon the larger Veins, and all these applied to the Feet, Legs and Thighs (1024. N^o. 1.) And likewise Mouth-washes, Gargles, Masticatories, such things as increase Spitting by their biting Qualities applied and held in the Mouth, Jaws, or Nostrils, will be of Service here.

1026. Strong Vomits and Purges, the Operation of which be surely known; Scarification and Cupping,

Cupping, and Bleeding do answer the second end in (1024. N^o. 2.) though the success of 'em be always pretty uncertain.

1027. But the Sluggishness, having first applied such as are determin'd to distant Parts (1024, 1025, 1026.) is dissolved by the general Remedies against Glewishness described in (75.) which ought to be used with Prudence, and to be applied to the Head in any form ; but of the greatest service are Blisters and the like drawing Plaisters, whether with or without Spanish Flies.

1028. If an Apoplexy from the said Causes (1023. is already present, it is seldom cured : If strength will bear, the same are to be tryed as from (1023. to 1028.) all those things are to be applied to the Nose, Mouth and Head, as are able to awaken the Senses ; all sort of sharp stimulating Means used, and the Belly to be loosen'd with sharp Glysters.

1029. It often happens however that these very Means do increase the Evil, by moving and driving the Matter more into the affected Parts by the stimulating of those Medicines ; and that Strength is soon exhausted by Evacuations : So that in order to conquer this Disease, a Physician must always insist on Evacuations, and withdrawing from the Head *as much as the Case before him will bear* ; upon which this ancient and ever true Maxim ; *That Bleeding doth kill, if it doth not instantly relieve.*

1030. But if that Apoplexy is foreseen to be at hand, delineated by the Signs mention'd in (1010. N^o. 2. l. β . N^o. 3. l. α . γ .) then ought imme-

immediate recourse to be had to such as can empty, resolve, and divert very suddenly. 1. Let Blood therefore immediately out of a large Vein and Orifice, chusing rather the Jugulars; which repeat as you see occasion: for after this you'll find an Amendment if the Case be curable.

2. Then give a stout and large cooling Purge, which repeat so often that you may raise an almost continual Looseness; And if they will not work soon enough, promote and forward their working by injecting some sharp Glyster, with Colocynthis. 3. Then during the whole Course of the illness exhibit cooling, diluting, attenuating, diuretic Medicines. 4. And at the same time apply strong Withdrawers, till the Illness be conquered. 5. His Diet be very thin and light.

6. Beware of all Medicines which strongly stimulate, stir up, and heat; from external Fire or Heat of any kind; suffer him not to lie down upon a Bed, or otherways in a Supine or much leaning Posture.

1031. But if that sort of Apoplexy has already invaded, there is hardly any hopes of a Recovery, unless it be by doing what has been just now mentioned.

1032. But that which proceeds from extravasated Liquids between the Cranium and Membranes, between the two Membranes, from a Wound, Bruise, Fracture, or Imposthume, of that we have already treated in the Chapter about the Wounds of the Head, (267, 268. 273. to 297.) to which we refer the Reader.

1033. Such as is already occasioned and produced by the effusion of the Liquids into the several Cavities and Ventricles of the Brain it self (1010. N^o. 4.) and is known by its proper Signs there laid down, doth hardly require any Means to be used, because the Patient seldom fails of dying very suddenly : But if any thing be tryed, all your Hopes must be grounded, 1. On the sudden driving of those Liquids into the Veins (279, 280.) 2. On the correcting of the predominant acrimony and toughness together, which is not to be effected more happily than by soapy Chymical Medicines.

1034. That which was produced by a predominant extravasated Lympha, is easier cured ; by forbearing to bleed, which rather is prejudicial than of any Service here : by giving immediately those Purges as are reputed to be the most effectual in purging of Waters ; by large blistering Plaisters, chiefly if kept running a long while ; a drying Diet ; strong drawing Plaisters, Issues, and Setons.

1035. But if the same is occasion'd by some unknown Poison, we know hitherto of no Medicine, which will soon enough operate to cure the same ; Nor also any which will cure that produced by a Polypus Concretion.

Of the Catalepsis.

1036. *Catoche*, *Catochus*, or *Catalepsis*, is that Disease in which the Patient becomes of a suddain unmoved, void of feeling, and retains that same Posture and Action of all the Parts of his Body which

which it was in when the Disease seized him first.

“NB. This doth happen so seldom, that there is
“hardly one Physician in ten, who in fifty Years
“Practice shall happen to see it.

1037. Its nearest Cause therefore is the unmoveableness of the *Sensorium Commune*, which continues to send forth its supply of Spirits only to those Nerves that were in action at the time of the Disease's first invading.

1038. Consequently an entire rest (as in the beginning before Conception and original motion of the Heart) of the Blood in the Brain, the Glands of the Brain and their Emissaries.

1039. All the Functions of the Brain are disturbed in this Disease, and also such as depend from 'em; only the Muscles remain in that tension as they were in the beginning; Breathing and Pulsation of Arteries remain, but commonly very weak, and not much perceivable.

1040. Intermitting Fevers of long continuance, chiefly a Quartan; a melancholic, dry, and lank Constitution; the suppression of the Menfes or Piles; great and sudden Frights; a deep and long continued intense Meditation upon the same Object; Strong Fevers set a flaming in a Man of a very Sanguine Constitution, all these do mostly precede this Disease.

1041. Dissected Bodies have made it plain and certain, that the Arteries and Veins of the Brain are very turgid with thick Blood forcibly drove into them.

1042. It is often cured by raising and promoting a large Bleeding at the Nose.

1043. It seldom changes into other Diseases, yet it has sometimes been succeeded by the Falling-Sickness, Convulsions, Foolishness, and wasting from a want of Nourishment; but most times ends in Death.

1044. The Method is to be alter'd, and different Means to be tryed according to the variety of the Cause: By waking and stirring the Patient up by Means of Objects acting with a great force upon the Organs of Senses, as are light, sound, stimulating and pricking Medicines, as very sharp Sal Volatile; such as cause Pain, frictions and tossing him up and down for some time; by making him bleed at the Nose, by promoting the flowing of the Piles or Menfes; by Sneezings, Vomits, Blisters, Issues, Setons, and a moist Diet.

Of a Carus.

1045. The Carus is a slight Apoplexy, but a very heavy obstinate Sleepiness with a Fever, chiefly from Causes which do press much upon the yet unhurt Brain. (1010. N^o. 3. l. α . β . γ . δ .) or such as obstruct the same, but easier dissolvable than in an Apoplexy. (1010. N^o. 3. l. β . γ .) The Patient here has some perception, but a very sudden one; some Sensation, but in a very small degree.

1046. Hence one may reasonably expect a perfect Health (and it generally falls out so.) after the overcoming of the Carus, only the Patient is apt to retain for some time after a shaking and wagging of his Head.

1047. One may see and know how to cure this Disease from the Method of curing Apoplexies deliver'd from (1020. to 1036.)

1048. The wakeful and the sleepy Coma, and the Cataphora seem to be only slighter Sorts of Cari; look back from (703. to 710.)

1049. A Lethargy also is a slighter sort of Apoplexy from a cold, slow and watry Cause, so that the Knowledge of its Nature and Cure is to be fetch'd from (1008. to 1036.)

O F

CHRONICAL DISEASES.

1050. **H**itherto we have treated of the most remarkable internal and external acute Diseases : It's time we come to the Chronical. These, if bred in the Body, took their Origin either from the Defects of the Liquids bred therein gradually, or from the Defects left behind by acute Diseases, that have not been entirely cured.

1051. The Defects bred gradually in the Liquids proceed, 1. From the assumed Air, Meat, Drink, Sauces, Medicines, or Poisons, so foreign, as not to be like unto the Liquids of our Body, or so strong, that they cannot be made like unto them by the power of our Bowels and Liquids. And these are, *α. a Sharpness.* (60. to 69.) *β. a Roughness,* consisting of a sharpness and earthiness joyn'd to the first in a great Proportion, like unto that which we perceive in unripe Fruits, or adstringent Juices, Wines, and the like; which do coagulate our Liquors, constrain the Vessels and make them narrower, whence they give birth to hard Obstructions (31. 36. 40. 50, 51. 113. N°. 1. 117.) It is cured with Diluters, fixed Alcalies, soapy Alcalies, used long and with discretion. *γ. An aromatick Fatness,* from Meat, Drink, and Sauces, which appear hot to the Smell and Taste;

Taste; These do produce a heat, attrition, an injury of the smallest Vessels, hot Pains, attenuation of the Liquors, a Putrifaction of the same, Extravasations, and a great many more such Evils; They are cured with watry, meally, gelatinous and acid Means. *δ. a Sluggish fatness*, from the too great use of fat things, either of Land Animals, Fishes or oily Vegetables; hence the Obstruction of (117.) a bilious Rustiness, an Inflammation, Corrosion, and worst sort of Putrifaction (82. 526.): This is-cured with Diluters, soapy and acid Medicines and Diet. *ε. A briny Saltiness*, from the use of Salt or salt Things; This destroys the Vessels, breaks the Liquids, makes them Sharp; hence a Wasting, a Solution of the Vessels, Extravasations of the Liquids not putrefying soon but producing Spots. 'Tis cured with Water, Acids, and the Use of Lime-water. *ζ. An Alkali*. (76. to 91.) *η. A Glem*. (69. to 76.)

2. From a too great Power of our Faculties over the things assumed. (50. to 58. 92 to 106.)
3. From the spontaneous vicious changes of our Humors. (58. to 91.)

1052. Defects arise in the Humors of our Bodies in any place from acute Diseases ill cured:

- α. Purulent Diseases*, (158. N^o. 5, 6, 7. 402.) Which produce many Evils, (936. N^o. 4. 941.) They are cured according to (492.).
- β. Ichorous Diseases* (158. N^o. 4. 206.) whose effects are gnawing, and consuming. They are cured with gentle, softning and thickning Means.
- γ. Putrified Defects*, which have been enumerated (1051. N^o. 1. 1. γ. 3. N^o. 3.)

1053. Acute Diseases ill cured in the solid or compound Parts, are apt to leave behind *Impostumes*. (387. 402.) *Fistules*. (413.) *Empyemas*. (894.) *Schirrous Tumors*. (392. 484, 485, 486.) *Cancers*. (492. 494.) *Caries*. (526.)

1054. From these in simple Diseases (1051, 1052, 1053.) or any way compound with themselves, it is usual for almost an Infinity of others to follow as their Effects ; which therefore may be thoroughly known and cured from the History of those well understood.

1055. And as all Chronical Diseases do, as it will be made evident, depend from thence, we must therefore fetch their general Doctrine and division also from thence.

1056. So that it is also plain at first Sight, that those Diseases are indeed numberless, on account of their Symptoms, and yet not of so compound a Nature as to their Origin, nor do require such variety of Medicines or Intentions in the Cure ; Thence one may also perceive and guess the Reasons of the long Continuance of most and the Impossibility of curing many : All which will be made more plain in treating of them separately.

Of a Palsie.

1057. A Palsie is called that loose unmoveableness of a Muscle which is not superable by any endeavours of the will or vital Power : Feeling is sometimes wholly lost at the same time ; sometimes that remains in a small Degree, with a numbness, and like a slight pricking Sensation.

1058. Its

1058. Its proximate Cause is always a hindrance of the flux of the nervous or arterial Juice into the paralytic Muscle from the Brain.

1059. It may therefore be produced, 1. By every Cause creating an Apoplexy. (1010.) 2. From all such as renders the Nerves incapable to let the Animal Spirits pass through them. 3. That, which hinders the ingress of the arterial Blood into the Muscle. Hence may be understood the Nature of a Paraplegia, Hemiplegia, and Palsie of a singular Part or Limb.

1060. So that an Apoplexy; a slighter Parapoplexy (1009, 1010. 1015.) The Falling-Sickness, Convulsions; A great and long continued Pain; The suppression of all usual Evacuations with a subsequent Giddiness, as that of the Menses, Piles, Imposthumes, Fistules, Stool, Bladder, Spittle; Translations of any morbid Matter in acute or chronical Diseases; all that offends the Nerves by obstructing, separating, pressing, tying, twisting, turning aside or binding them strait; all thick Humors therefore, Wounds, Corrosions, Imposthumes, Gangrenes, inflammatory Tumors in the Integuments of the nervous Marrow, in tendinous Tumors, or the Nerves themselves; ferous, purulent, ichorous, schirrous and the like Tumors in those Parts; strong and strait Ligatures, Fractures, Luxations, very adstringent Aliments, Medicines or Poisons; Whence a very great coldness, great heat, a cold moistness, too great and frequent use of warm Water, the steam of Arsenic, Antimony, fresh quick Lime, Mercury, and other Poisons, are able to cause a Palsie.

1061. The

1061. The proximate Cause (1058.) and the remote ones, (1059, 1060.) and consequently the Palsie it self produced by them doth occasion various and fundry Effects, according to the different Seat, where that Cause doth rest, according to the different degree in which it rests there; according to the difference of the Part affected, as that is more or less necessary to Life, and that more or less immediately in it self; for from thence it is known to be more or less Mortal, Curable or Incurable.

1062. A Palsie of the Heart, Lungs, Muscles the Instruments of breathing and that of the Gullet, doth kill very soon: That of the Stomach, Guts, and Bladder from inward Causes is very dangerous: That of the Muscles of the Face is of an ill Consequence, and easily terminates and changes into an Apoplexy. A Paraplegia is very dangerous, a forerunner of an Apoplexy, and is Mortal when that follows. A Hemiplegia is very bad, of a Kin with the Paraplegia, and therefore kills with an ensuing Apoplexy: That which is accompanied with a Coldness, Insensibility, wasting of the Part, is bad and seldom curable: That which comes on with a strong Convulsion of the opposite Part and a great Heat therein, is bad: And from the Opposition and Comparing of these it is known which is Curable and least to be feared, and which is so often the Cause of a sudden and inevitably unforeseen Death, without scarce any concomitant Symptom, which shou'd and cou'd have made you sensible of the Danger.

1063. All which (1057. to 1063.) if any body applies to all the Muscles appertaining to any Function whatever, he will understand the Causes of an infinite number of very wonderful Diseases, and will be also acquainted with their Diagnostics and Prognostics.

1064. Nature has cured this Disease by attenuating and dissipating the morbidick Matter, by depositing a defective and even vicious Crisis to the outsides of the Brain, its Ventricles, about the Medulla Oblongata, the Spinalis Medulla, the Egress of the Nerves from the Medulla, and the Nerves themselves; by loosening the impacted Matter with the help of a great Fever; stirring it by a convulsive Motion of the Part; or carrying it off with a great long continued Looseness.

1065. The Cure requires the removal of the Cause (1059. 1060.) which hindreth the function of the Nerves and Arteries, and then the restoring of the free Influx and Reflux.

1066. The hindring Cause is removed many ways, easily found out, when the Nature of the Cause it self is sufficiently known.

1067. If that Cause dwelling within be thick and stagnating, those Means ought to be used, which may produce those Operations, by whose assistance we have seen that Nature her self can cure.

1068. The Cure therefore is attempted, 1. With attenuating and dissipating Means. α . Aromatic, Cephalic, Nervine, and Uterine Plants, given in their Juices, Infusion, Decoction, Extracts, Spirits, or preserved. β . Fixed Salts made from them
with

with burning them whole, or volatile ones extracted from 'em by Distillation or Putrefaction. γ . Oils also produced from 'em by Expression, Coction, Infusion or Distillation. δ . Soapy Salts and Oils artfully made out of their conjunction. ϵ . Ill flavour'd parts of Animals, Juices of Insects, Spirits, Oils, Salts, and Tinctures. ζ . Fossil Salts, Crystals from Metals, and such as are mostly made up of them. η . Mixing all these things with that prudence that they may help each other: And by the use of them we may promise our selves to attenuate, to dissipate the foresaid Matter, and also to raise a beneficial Fever. 2. With powerful Stimulants, and such as will drive out all the strongly impacted Matters by causing a trembling Motion in the Nerves or even Convulsions: to this Class belong chiefly such as will promote strong Sneezing and Vomiting; chiefly if they are repeated some times. 3. With hot, resolving aromatic Purges from Vegetables or sharp Fossiles, or Mercurials, or Preparations of Antimony, and therefore with such as are celebrated by the Name of Hydragogues, given in a large Dose, repeated several Days successively: by whose aid a long continued Looseness with great Evacuation by Stool may be created. 4. Filling first the Vessels of the Body with great Quantities of such attenuating Decoctions as have been premised; Then occasioning greater Motions, and large Sweats by means of Spirits of Wine set afire in a particular manner for that purpose.

1069. Dry external Frictions causing heat to a Redness are beneficial, or accompanied with the applica-

applications to the Skin of Spirits endow'd with penetrant or stimulating qualities, whether from Animals or from Vegetables; or anointing with Oils, Liniments, Balsams, Ointments, or other nervous Medicines: Baths of all Sorts and Stews; Sharp, aromatic, drawing Plaisters; Cupping-glasses, Scarifications; Blisters, Whippings; such as will create a Pain and a slight Inflammation in the Parts, as Nettles, and the like.

1070. But Care must be taken above all, that all these Remedies be directly applied as much as possible to the Seat of the Cause: The offended part it self, many being affected in the same manner at the same time; The knowledge of the Muscles, Nerves, their union, origin, spreading, and the understanding the several Functions of each; if all these are compared together, they will most clearly demonstrate the Seat of the Evil.

Of the Falling-Sickness.

1071. A Distemper of a quite opposite Genius to the latter, is what is call'd *an Epilepsie*; which we know to be present, when any Body is thrown down suddenly with the loss of Internal and External Senses, with violent Concussions, and reciprocal involuntary Motions of all or some of the Muscles; with Alternate Rest and new Insults of 'em.

1072. This Disease wonderfully different in its many Aspects doth often appear so surprizing, that it has in all Ages been attributed to the Gods, Devils, Divine Wrath, Witchcraft, and the

the like Causes above, and greater than Natural ones.

1073. For there is no one Gesture, Inflexion or Posture of the Body known, which it has not shewn at some time; and it emulates all the Motions of running, walking, turning, bending forwards, laying down, standing upright, or keeping the Body in a very Stiff and almost insuperable Action.

1074. Yet all these Varieties do only consist in the Changes of Motions of some moveable Parts, which consequently are muscular; so that they only suppose various Contractions of the Muscles, and therefore only various influxes of the nervous Juice; hence a various expression of the same from the Sensorium Commune into the Nerves; And lastly, the various Causes which produce these Expressions in the Medulla Cerebri: Which will be best understood by giving an Historical Account of those Causes.

1075. They are, 1. *Hereditary* from a Family-defect on the Father or Mothers side, coming immediately from the Parents, or Ancestors; for it is common for this Disease to jump over a whole Generation, and to fix again on the Grandchildren. 2. *Born with* the Patient, from the strong Impression the Mother has received by looking on an Epileptick in his Fit. 3. Proceeding from *the Brain*, being ill-affected in its Integuments, Superficies, Substance or Ventricles, either by Wounds, Bruises, Imposthumes, Pus, Sanies, Ichor, Blood, sharp and foetid Lympha, bony Excrescencies of the inside of the Cranium, its pressings down upon
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the Brain; the cartilaginous Nature of the Sinusses of the Veins; Fragments or splinters of Bones, or Instruments hurting the Meninges, or Brain, or Quick-silver carried to the Brain any how. The same Brain being ill disposed by an Inflammation, Corruption, or Corrosion of the Meninges from the Caries of a Bone, black Choler, or Venereal Ulcers. All these Causes do the more mischief as they are increased, by all such things as do increase the influx of the Liquids into the Cranium, such as a Plethora, Motion, Heat, Drunkenness, Gluttony, immoderate Venery; an acute and deep Judgment, profound Meditation, great Passions of the Mind, a strong Fancy and Imagination; but above all Frights and Terrors. 4. All violent Affections of the Nerves, as all great and periodical Pains, hysteric Passions, Gnawings and Irritations from Worms, Teeth, sharp Humors, turn'd Milk and curdled like Cheese, grown sour, any other acid in Infants, Diacodium or Diascordium given them unseasonably, the Contagion of the Small Pox in their first state, violent Pains at the mouth of the Stomach (commonly called by the unskilful, a Pain at the Heart) an ulcerous Matter lurking somewhere, Fasting, Surfeit, or Sicknefs after hard Drinking, sharp Meat or Drink, Medicines or Poisons. 5. From the Stoppage of some Matter used to have their free Course, whether sanious Blood, Pus; the Menfes and Cleanings in Women; the Piles or Urine in both Sexes, but chiefly the former in Men. 6. Some Fumes which bring the Fits on again; Some Matter deposited in some part as in a Nest; whence
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it mounts up the Brain with the perception of a raised Vapour.

1076. All which Historical Observations, and the Anatomy of Bodies has made plain, beyond dispute.

1077. The Effects of this illness may be reduced to 1. The Diseases of the Brain vitiated by the many repeated and strong Convulsions; whence a wavering of Memory, Stupidness, Foolishness, Palsies, Apoplexies, Death. 2. To the Diseases of the Nerves and Muscles; whence the Distortions, Contractions, and Deformities of them and the Limbs. 3. To violent Cramps, whence Inflammations, Gangrenes, a blackness of the Parts the most abounding in Blood, chiefly such as are situated above the Muscles. 4. To some Secretions made violently at the very assault of the Paroxysm, as are Meat, Drink, Lympha, Bilis, Froath, Snivel, Spittle thrown upwards; and downwards green Stools, Seed, and Urine; Blood also thrown up or down may be ranked amongst the Effects.

1078. Hence may be understood, which be hereditary? And why that is never curable? That which is Idiopathic why seldom curable? but the Sympathic why often curable?

1079. It is also evident, that different Medicines and different Indications are requisite to cure this Disease, according to the known variety of the Cause, the peccant matter and place, to which the Remedy ought to be applied, and through which the Evil it self is to be fetch'd out.

1080. For the First and Second Cause depending on the wrong construction of the Solids,

lids (1075. N^o. 1, 2.) doth hardly admit of any total eradication of the Evil, but may safely carry off the Causes of the Paroxisms, which are renewed as they are continually growing afresh; So that those, which are infinite in number and not to be known but from Observation, are to be diligently search'd into, and then to be cured according to their Nature.

1081. The Third (1075. N^o. 3.) is known from other Symptoms, which likewise indicate the Brain to be offended, as is Pain, a heaviness, fulness, a received Injury on the Head, a Vertigo, a general trembling, sparkling of the Eyes, an unmoveableness or fixing of the same, a winding round of the whole Head or of the whole Body. The solid Cause of this can hardly be removed, because it is very seldom that a Singular one be known; here Revulsions and dissipating Means are useful, such as clear the Passage and depurate: Hence Bleeding, Purging, Vomiting, Burning, Issues, Fistules, a Blister, a Wound of the Head, the Trepanning of the Scull, Antihysterics and Opiates are useful: Which now must be learn'd from the discovery of the proximate Cause of the Disease. (1079.)

1082. That which proceeds from the Fourth Cause (1075. N^o. 4.) ought to be treated differently, according to the different Nature of its proximate Cause: Hence do all Anodynes, Purgatives, Narcotics, Antihysterics, Antihelmintics (that is, Medicines against the Worms); such as soften and correct Acrimonies, a seasonable cutting of the Gums; The ablation, and correction
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of a present ulcerous Matter ; all these, I say, become by their operation Antepileptics.

1083. An Epilepsy created by the Fifth Cause (1075. N^o. 5.) may be remedied by dissolving the Matter unfit for stirring, loosening the ways, and driving the same out of the Body. Hence do so often succeed in this Disease Blisters, Caustics, producing Issues or Fistules ; Forcing Medicines, such as provoke the terms, and open the Piles ; and Diuretics.

1084. But those that proceed from the Sixth Cause (1075. N^o. 6.) may be removed by Curing the Weakness of the System of the Nerves too easily stirred up ; which is best done by the exercise of Motion, playing, riding on Horseback or in a Chaise ; the use of Aromatics, of Steel and strengthening Medicines and Diet : Than by procuring an Ulcer, upon the place where the Matter lyeth lurking, to be made deep, lasting, by Cutting, Caustics or Blistering : then keeping the same running for a long while by means of Suppurating Medicines mixed with Corrosives : Lastly, by Ligatures pressing upon the affected Nerve.

1085. Hence is sufficiently exposed the Vanity of the celebrated Specifics and Methods, which boasting idle People do brag of in this Disease.

1086. And it is Evident also, that the proximate Cause of all true Epilepsies is always the too great action of the Brain upon the Nerves which are the Organs of Motion, and the Privation of that in the Nerves dedicated to Sensation.

1087. And

1087. And that the Causes, which create the reciprocal Paroxifms, are many in number and variety.

1088. And laftly, the Origin, Nature, Effects and Cure of the particular Cramps or Convulfions, of the Opifthotonos, Emproftthotonos, and the Universal Tetanos are alfo evident; as they are nothing elfe than a kind of a fingular Fit of an Epilepfy.

Of Melancholy.

1089. Phyficians call that Difafe a Melancholy, in which the Patient is delirious long, and obftinately, without a Fever, and always intent upon one and the fame Thought.

1090. This Difafe arifes from that malignancy of the Blood and Humors, which the Ancients have called *Black choler*: And again, though this Difafe doth begin in what is called the Mind, it yet doth render the Choler black in the Body very foon.

1091. It will be therefore needful to draw a fmall Sketch of this wonderful Difafe, whereof the Doctrine is fupposed commonly to be fo dark, that Antiquity is unjuftly blamed for it.

1092. If the moft moveable parts of all the Blood be diffipated and have left the lefs moveable united, then will the Blood become thick, black, fat and earthy. And this defect will be call'd by the Name of an *Atrabiliar Humor*, or *Melancholy Juyce*.

1093. Whereof the Cause is whatever doth expel the moft moveable and fixes the reft: A vio-

lent Exercise of the Mind ; the dwelling Night and Day mostly upon one and the same Object ; a constant wakefulness ; great motions of the Mind, whether of Joy or Sorrow ; great and laborious motions of the Body much repeated, chiefly in a very hot and dry Air ; hereto refer also Immoderate Venery ; rough, hard, dry, earthy Aliments long used without any Motion or Exercise of the Body to digest them ; The like drink ; Parts of Animals dry'd in Smoak, Air or Salt, chiefly of old and tough ones ; unripe Fruits ; meally unfermented Matters ; adstringent, coagulating, sticking and cooling Medicines, and slow Poysons of the like Nature : hot Fevers hanging about long, often returning without a good Crisis and going off without the Help of diluting Means.

1094. When this Evil already bred in the Blood and produced by these Causes doth yet infect equally all the circulating mass of Humors, it will produce some Diseases, which will appear immediately, and are mostly as follows ; The Colour of the Patient internally and externally is first paler, yellower, more tawny, livid, black with the like Spots ; the Pulse slower ; Coldness greater ; a slow Breathing ; The Circulation through the Blood-vessels good, more sparing through the Side-vessels, and less good ; hence a slower, less, and thicker separation of all the secretory and excretory Humors, a less wasting of 'em ; a lessen'd Appetite ; a Leanness ; Sorrowfulness ; love of Solitude ; all the Affections of the Mind violent and lasting ; an Indifferency to all other Matters ; a Laziness as to Motion ; and yet a very great
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and earnest Application to any sort of Study or Labour.

1095. Its matter therefore is the earth and thick oil of the Blood united and closed up together, which is worse in its Effects, and more difficult to cure, according to its degrees of fluidity, softness, driness, thickness, intimate mixture and time of being so.

1096. Hence are the Diagnostics and Prognostics plain enough (though yet clearer from what follows) and the rationality of the Cure doth also occur easie enough from these Principles.

1097. For as soon as it shews it self by what is said in the Beginning of both, (1093, and 1094.) either as a Cause or an Effect, the Physician ought to procure a continual change of Objects and that without the Patient's knowledge; and such ought to be chosen, which are able to raise a Passion opposite to the most predominant in him: Sleep ought to be procured him by diluting, softning, paregoric, narcotic Medicines, and by Rest; Let him breath a moist and moderately warm Air; his Aliments be light, liquid, like unto our wholesome Liquors, recent, soft, loosening with a gentle soapy Faculty, and he must continue long in the use of 'em: Give diluting Medicines, as soften the Acrimony, resolve the oily Earthiness, loosen the Vessels, expel with a gentle Stimulus; Such are the Juices of thorough-ripe Fruits, all things made up with Honey, Garden Herbs, and Broaths made of them; Mineral Waters: The best Drink is a Ptisane sweetened with a little Honey. And above all things,

great Care must be taken to debar him from all the Causes of the Illness (1093.)

1098. But if that very Matter (1092.) be from the same Causes (1093.) grown thicker, tougher, and less moveable; it must necessarily be drove into the Hypochondriac Vessels; this the Nature of that Humor, the seat and condition of those Vessels and the Laws of motion of the Liquids do demonstrate. Here it will gradually stop, be accumulated and stagnate: Then it is called an *Hypochondriac Disease*, or in usual terms in *England*, *The Spleen*; as it doth obsess the Spleen, Stomach, Pancreas, Caul or Mesentery.

1099. Hence it produces there gradually a sense of a constant weight, anguish, fullness, chiefly after eating and drinking; a difficult breathing from the Bowels of the abdomen being burthened; Impediments of both the Cholers, of the pancreatic, stomachic, mesenteric Juice, and of the Intestines as to the coction, secretion, mixture, and operation upon the Aliments; hence the first digestion vitiated all manner of ways; a corruption of the Aliments in a crude acid, if they were of the vegetable Kind, or into a putrid Alkali, or an oily rustiness, if they were of the animal Kind; hence Belches, Winds, Cramps, Costiveness, and very hard Stools; a Jaundice of a worse sort than the First in (1094.) and all the bad Symptoms of (1094.) now grown much worse.

1100. When it is already grown to the Height of 1098.) and has shewn it self such by its Effects of (1099.) Then ought no time nor means to be neglected towards the Cure; for otherways the

the Evil soon grows terrible in its Nature ; and those Difficulties ought to be prevented if possible : If it continues in this state any time it becomes incurable , and sometimes mortal , as will appear hereafter : If you attack it with purging Medicines, you only drive out the wholesome and moveable Humors , but the tough and bad ones do stay behind, whence the Disease grows worse still : If you attempt the Cure with stimulating and powerfully resolving Medicines , then doth often the loosen'd Matter grow very sharp , and throwing it self with a great violence upon the tender Vessels of the Liver , it destroys them, whence many and incurable Ills.

1101. So that, 1. The Matter is to be render'd moveable slowly, inquiring into the Nature of the predominant Acrimony; then giving soapy Medicines in which there is an Acrimony predominant over that which is in the peccant Matter ; These must be continued till the unequal and weak Pulse, a nauseating, or a continual pressing to go to Stool, an Anxiety, and a small Fever do signify that the Matter is put into motion ; And then, 2. Drive the same out immediately with a gentle opening Purge, a Glyster of the same kind, Milk-whey, Mineral-waters, and the like.

1102. But if that very Matter of (1098.) already fixed, and drove in close, has been detain'd there long ; the same begins already to grow sharp and gnawing by its Stagnation, the motion of the Bowels and the heat of surrounding Parts ; new Matter is continually laid on, because the Obstruction is made already, and the same Causes

do subsist; hence it extends, gnaws and corrupts the Vessels by its encreased bulk, its present Acrimony and continual Motion; hence the like destruction of the Spleen, Stomach, Pancreas, Caul, Mesentery, Intestines, and Liver, and consequently all the Evils of (1099.) do increase the former much, but disturbs chiefly all the Functions, and above all those of the Brain, by the constant Steam of the putrified Matter received into the Veins. And then may it be called by the true Name of *Atra bilis*.

1103. Which being discover'd by these its Signs, laid down in (1093. 1094. 1099. 1102.) cannot but with the greatest Prudence and Skill be thinn'd, moved or drove out, because of the Difficulties mention'd in 1100.) Which here are yet greater, and because that the Matter now arrived to its greatest degree of Acrimony is easily stirr'd up, but very difficultly quieted again. Let therefore all his Diet be of a very opposite nature to the known predominant Acrimony of the Matter, described in (1051.) Let the same always be gently resolving, stimulating, loosening by Stool, carrying off almost all the Excrements after each Digestion; his drink be of a Ptyfane with some Honey, or made of ripe Fruits, or Milk-whey; Let his Motions be gentle, but continued; his Heat very temperate; his Sleep long; Let him frequently use Bathing, Fomentations, Glysters, and drink of those things which being free from Acrimony do thin the Matter by diluting, resolving, cleansing and soaking, and then do expel the same very slowly and cautiously, and that only through

through the Passage as Nature directs, having always an eye to the singular Acrimony in this Case, which never fails of being present in view.

1104. But when that Evil of (1102.) is already advanced to a great Acrimony, with the Bowels already much corrupted, if during the said (1102.) causes it be put in motion and stirred up with a muscular Motion, the heat of Sun or Fire, a plentiful and sharp Diet, sharp and much stirring Medicines which will ferment with the sharpness of the Evil, poisons that hurt by the same operation, or lastly with some Diseases; Then doth the same, grown sharper and moveable and already changed into an Agent, break, corrupt and dissolve its Vessels into a Rottenness, and change them with the very *Atra bilis* into putrified Bags; and now it is the *Atra bilis* become turgid; And when this is now brought so far, if liquefied in its Vessels, and transported towards and into the Liver, creeping into the consumed ramifications of the Vena Cava, it be let into the Heart, then doth it create those pernicious Evils: for if it participates of a coagulating Acid, it creates Polypusses of the Heart, Lungs, Aorta, Carotids, their ill Consequences and Death: If it reaches the Brain it produces Apoplexies, Palsies, a Catalepsy, an Epilepsy, Deliriums, furious Madness, all these of the worst Sort and Incurable. In the System of Arteries it changes the whole face of Things, there it brings forth very terrible Fevers, which do putrify all things very suddenly: If it participates of the putrifying Alkali, it creates suddenly killing Gangrenes wherever it reacheth

reacheth. Whence innumerable and incurable Diseases over the whole Body and each singular Part, unless this sink and Nest be cleansed and stopped up. But if the Matter, having eat through the Vessels of the Bowels, doth fall into the Cavities of the Peritoneum, there ariseth immediately a very great and insuperable Weakness; a Putrefaction and an accumulation of the sharp delaps'd Matter; Then a Gangrenous eating of all the abdominal Entrails, whence most admirable and terrible Phænomena; a Tympanitis; Death with a prodigious Stench: But if the same, when put into a Motion, doth throw it self upon the Liver, and from thence through the dilated and eaten bilious Vessels into the Gall-bladder, the Ductus hepaticus, the common Ductus, into the Intestines, then doth it create Loathings, Vomitings, atrabiliar Bloody-Fluxes, with an Anguish, an Impetus, Pain, Gnawing, all intolerable; whence Inflammations, Ulcerations, Putrifications of the Intestines, Stomach, Gullet, Jaws, and Mouth: Hence terrible Convulsions, and at last a pretty easie Death following upon the Gangrene, and consequently the loss of feeling in all the Parts of the Body.

1105. But when the Matter is become as is (1104.) it has together with a very great toughness, not unlike Pitch, a most sharp acid Acrimony, which is able to eat into Metals, to make Earth ferment; or an Alcaline, very corrosive; or an oily putrid salt which is worst of all. All which distinct Sorts whence they come, how they are known, how cured has been sufficiently demon-

demonstrated before from (58. to 107. and 1051, 1052.)

1106. And it is easie to all, who consider what was said in (1000. 1003. 1004.) and the Seat, Structure and Circulation of the Bowels, in which this malignant Humor doth reside, That this Disease is greater than to admit of a Cure. But the chief Helps are such as dilute with a sharpness of an opposite Nature to the predominant Acrimony, or Opium.

1107. From which (1090. to 1107.) the Nature of Melancholy and Hypochondriac Diseases as described in (1089.) is known : for it is evident, that from a long continued preceeding sorrowfulness, the Vessels of the abdominal Bowels create a Stagnation, Alteration, and Accumulation of black choler (1092. 3. 5. 1098. 1102. 1104.) Which insensibly increaseth, though the Body was very healthful but a little before : And also that the same black choler, when bred from bodily Causes, doth produce that Delirium of (1084.).

1108. The apparent Causes of Melancholy therefore have been observed to be, 1. All things, which fix, exhaust, or confound the nervous Juices from the Brain ; as great and much unforeseen frightful Accidents ; a great application upon any Object whatever, strong Love, Waking, Solitude, Fear, and hysterical Affections. 2. Those which hinder and confound the Confection, Refection, Circulation, the various Secretions and Excretions of the Blood, chiefly if done in the Spleen, Stomach, Caul, Pancreas, Mesentery, Intestines, Liver, Womb, or hemorrhoidal Vessels : and consequently

quently any hypocondriac Disease, acute ones, imperfectly cured, and chiefly a Phrenitis, or a burning Fever; all exceeding Secretions and Excretions, eating, and drinking cold, earthy, tough, rough, or adstringent Aliments; too great a heat long continued, which doth as it were, roast the Blood; a stagnating, fenny, or too shady Air.

3. A natural disposition of the Body, such as a black, hoary, dry, lean or manly one; A middle Age; a sharp, deep and penetrating Judgment.

1109. If this (1089.) Disease doth continue long it occasions Foolishness, Epilepsies, Apoplexies, furious Madness, Convulsions, Blindness, wonderful Fancies, Laughters, Cryings, Singings, Sighings, Belchings, Anguishes; great Evacuations of Urine, sometimes clear like fair Water, at other times very thick; a retention, accumulation, often a sudden Excretion of bloody Fæces in the Vessels of the abdominal Viscera; an obstinate Costiveness, a thin and frequent Spitting, and they can endure to be without Sleep, Aliments, or Fire, even to a Wonder.

1110. A Cure has often unexpectedly been obtain'd at the appearance and breaking out of a nasty Itch sometimes coming up and resembling a Leprosie; or numerous Varices and them very large; or flowing of the much swell'd Piles; or at the voiding of black Choler upwards and downwards.

1111. It grows much worse upon the taking of any Medicines, that weaken Strength, and evacuate roughly; or again upon the taking of such

as put the Liquids into a violent Motion, whether they be Cordials, or cryed up under any other Title.

1112. So that the best Method to cure this Disease, is to apply different Remedies and opposite to the different Sorts known from the exact observation of the proximate Cause and different Constitution of the Patient.

1113. 1. The Indications will be therefore to excite, increase, and bring into a good order the Liquids of the Brain and Nerves; which is done;
α. By withdrawing the Mind from the usual object to others contrary to the same. *β.* By causing and raising very artfully another Passion of the Mind contrary to the constant Melancholic one.
γ. Sometimes by Siding with them in their false and depraved Fancies. *δ.* Or often by opposing the same with a great Force.

1114. 2. By opening, softning, cutting, stimulating the Obstructions, or the Cause, or the Effects of a false Imagination, with mineral Waters, Milk-whey, Water and Honey, Splanchnick, Hepatic or Antihypochondriac Decoctions, Waters made effectual with the addition of Lixivious or Compound Salts; loosening Mercurials, Vomits, Motions, Exercises, Riding, or going in a Boat; Medicines which evacuate from the Womb (as are the Aristolochica) or the Piles; Bathings, Ointments, or Plaisters.

1115. 3. Easing the Symptoms with Bleeding, ducking into cold Water, by Carminatives and Opiates.

1116. 4. After the just mentioned Evacuations By giving such as Experience doth shew us to be Exhilarating and to strengthen all the Parts of the Body.

1117. From which (1110. to 1117.) it appears, that the Cure of this Disease (1089.) is perfected in curing the black Choler (1097. 1100. 1101. 1103. 1106.) And that we must hence learn the Cure not only of this Disease : But of an infinite Number of others, which are wrongfully reputed incurable.

Of Madness.

1118. If Melancholy (1089.) increases so far, that from the great motion of the Liquid of the Brain the Patient be thrown into a wild Fury, it is call'd *Madness*.

1119. Which differs only in degree from the sorrowful kind of Melancholy, is its Offspring, produced from the same Causes, and cured almost by the same Remedies.

1120. In which Disease the Patient generally shews a great Strength of the Muscles, an incredible Wakefulness, a bearing to a wonder of Cold and Hunger, frightful Fancies, Endeavours to bite Men like Wolves, or Dogs, &c.

1121. And we must take notice that by Anatomical Inspection it has been made evident, that the Brain of those is dry, hard, friable, and yellow in its Cortex ; but the Vessels turgid, varicous and distended with black and very tough Blood.

1122. And also that almost all the Excretions are suspended.

1123. The

1123. The greatest Remedy for it is to throw the Patient unwarily into the Sea, and to keep him under Water as long as he can possibly bear without being quite stifled.

1124. When all Remedies have been tryed in vain, it has sometimes happen'd that varicous Tumors, Piles, Dysenteries, Dropsies, great Hæmorrhages come of themselves, and Tertian or Quartan Agues have cured this Disease.

1125. This sort of Madness is occasion'd sometimes after the Body has been exhausted by an autumnal, strong, obstinate intermitting Fever, and not only thus weaken'd by the Disease but by repeated Bleedings, and Purges; which same will also occasion the return of this Disease.

1126. This sort is cured only with restorative, replenishing, Cordials, strengthening Aliments and Medicines long continued: But if you attempt the Cure of it by Evacuations, you'll cause a Wasting, Weakness, and an insuperable Foolishness.

NB. See *Sydenham's* Treatise of the Intermittent kind of Fevers from the Year 1661. to 1664.

1127. But a Madness bred in strong, hail, youthful, plethoric People of a hot Constitution, is cured by the same Means as that sort of Epilepsy in (1081.) By repeated letting of Blood and strong Purges between each Bleeding, and afterwards when you have lay'd his fury, and have brought him to his Senses, then give him Cordials and Opiums.

Of the Dog-Madness.

1128. There is still another Disease, which is conveniently mentioned now because of its Companion, the furious Madness, and ought to be treated of by it self, because of its desperate and ill Nature.

1129. It's called Fury or Madness, and because mostly proceeding from the bite of Dogs, a Dog-Madness, and from that terrible Symptom of *fearing Water*, an *Hydrophoby*, &c.

1130. It almost ever arises from other Animals, which were first Mad, and that by Contagion : Though also sometimes of its own accord in some acute Fevers, as has been observed and we find recorded.

1131. Almost all sorts of Animals may be affected with this Evil, and by their Contagion infect others, and even Men.

1132. Dogs, Cats, Wolves, Foxes, Horses, Mules, Oxen, Sows, Monkeys, Turkey-Cocks, Men ; All these being first Mad themselves, have communicated the same Madness to others.

1133. But it is common to none so frequently as Dogs, Wolves, and Foxes, and these it invades chiefly from inward Causes without catching it from any others.

1134. A hot Country ; a Country open and exposed to violent Heats, and also to very cold raw Weather ; hot and dry Weather long continued ; The living upon rotten, stinking, and worm-eaten Meat ; want of Drink ; worms grown in the Kidneys, Guts, Brain, or the inside of the Nostrils ;

Nostrils; All these are preceeding Causes of Mad-
ness in Beasts just now mentioned.

1135. The Signs of a beginning Madness are chiefly these, at whose appearance also due Care must be taken to avoid other Animals or Men being infected, by removing them, &c. They first grow sad, chuse to be alone, hide themselves, dumb as to their barking or other usual noise, but yet are grumbling, they are averse to all Meat and Drink, they are provoked at the Sight of all Strangers and fall upon 'em, however yet remembering and fearing their Master; They hang down their Ears and Tails, They seem to sleep as they go along: And this is the first state of the Illness; and if they happen to bite then, it is dangerous, but yet nothing near so bad as afterwards. Now they begin to pant, loll out their Tongue, to froath much about the Mouth, they gape; you'll see 'em sometimes walk as if they were half asleep and presently again run on very quickly, and that not strait forwards always; Now they scarce any longer know their own Master, their Eyelids hang down, they seem to weep, to have dust in their Eyes; Their Tongue is of a Lead-colour, they suddenly grow very thin, mad and furious: This is the Second degree of the Illness, which they can hardly endure longer than thirty Hours, after which they die. A Bite from them in this State is almost incurable: And the violenter the Madness is, the longer they have been affected, and the nearer to their End, so much the more mortal is the Bite, sharper, and the more violent the Symptoms which

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come

come on very suddenly; and so on the contrary, &c.

1136. There is scarce any Poison which infects so many ways, for the slightest Bite imaginable through ones Clothes, only scraping and not deep enough to fetch blood; The contact of fresh froth, or even of such as has been dried up some time applied to the Lips or Tongue; A Kiss only given to a mad Dog; The handling much of an Instrument or the Wound of which and by which the Animal has been kill'd some time since; The eating of the Meat or Milk of a mad Creature; The feeling and often handling of Things that have been infected by any of the just mentioned; All these will infect Man or Beast.

1137. Again, There is scarce any Poison known, whereof the Malignancy is so terrible and occasions such prodigious changes in Men; and which, when it has once begun to shew it self, doth so suddenly and so furiously Rage, and which notwithstanding can at other times lie conceal'd so long, before it be discover'd. For some People are immediately affected with the Symptoms of this Disease, some not till twenty Years after they were bit, and some are more or less disorder'd all the while between its first Occasion and its last Scene: This difference depends from the heat of the Weather, from the several degrees of Infection in the Animal that did Bite, (1135.) the Constitution of the Person who received the Hurt (for cholerick Men are sooner and quicker affected, but phlegmatic or dropical People slower.) And lastly,

lastly, from the different Diet and application of Medicines.

1138. When a Man in perfect health is infected with this Poison after different distances of Time (1137.) he begins to be disorder'd much after the following manner : The Place pains him, where he first of all receiv'd the Injury ; Then follow wandring uncertain Pains in other, but chiefly the nearest Parts ; a weariness, heaviness, slowness succeeds in the whole System of the Muscles ; his Sleeps are disturb'd, uneasy, full of frights, convulsions, and catchings in the Tendons ; he is continually restless, sighs, looks dejected and affects to be alone ; and it is much after this manner, that this Disease begins and finishes its first Stage : If you bleed him then, the Blood doth not carry the Face of any Defect. Then are all the foregoing Symptoms increased, and there follows besides a prodigious narrowness and pressure about the Heart and Chest, Breathing is difficult, and accompanied with Sighs ; he frequently shakes all over ; his hairs stand an end, and trembles all over at the sight of Water, of any sort of Liquors, or even upon the sight of transparent Things, or reflecting like Looking-glasses ; he loses his Appetite entirely, yet he can swallow any thing that is very dry and solid : The touch of any moisture chiefly with his Lips or Tongue creates an incredible Anguish, Tremors, violent Convulsions and a Raving ; he vomits tawny, glewish Choler or green like Leeks ; he grows very hot, feverish, sleepless ; is troubled with a Priapisme ; and he thinks very disorderly of things quite foreign and

unusual. Thus doth it go on, and here absolves its second Stage. Afterwards doth every thing constantly grow worse, and you'll soon see him loll out his rough and dry Tongue, gape wide, speak hoarse, have a great Drought, grow raving at every attempt to drink at the sight or touch of any Liquor; gather Froath in and about his Mouth; to endeavour the spitting of the same upon the By-standers even against his Will; to bite and snap at every thing within his reach and that unvoluntarily, nor yet to be withheld from those Attempts; he gnashes his Teeth with froth, snarling like a Dog; his Pulse now and breathing begin to fail, Cold sweats break out on all sides, Raves in the highest degree, notwithstanding which he is all the while sensible and is afraid for the By-standers that he shall unwillingly hurt 'em. Hence you may always reckon upon his dying (within the fourth Day from the first State of his Illness) convulsed with a most terrible Anguish upon drawing his Breath.

1139. From this whole History (from 1129. to 1139.) the Nature of this Illness may be understood: The Prognostic may be drawn from the Consideration (of 1135. 1137, 1138.) at the same time always preparing for the most dismal Events; For since Physick has been an Art, the most famous Physicians have been known to lament, *That there have been so few Examples of People preserv'd from Madness after they were bitten by mad Animals: But that there have been certainly none saved after their arrival to the Symptom of dreading Water.* But it is mostly deplorable

deplorable, that after so many Ages, which have complain'd and bemoan'd the useless Application of all the hitherto commended Remedies, no Method shou'd have been attempted different from the former.

1140. The Anatomy of Bodies has shewn, that the Organs for Swallowing are most times inflamed; that there is a bilious Glew of several colours in the Stomach; that the Gall-bladder is full of black Choler; That the Pericardium is quite dried up; that the Lungs are surprizingly full of Blood heap'd up therein; that the Heart is full of Blood almost all dried up; the Arteries full, the Veins empty; the Blood very liquid, which hardly wou'd run together when exposed in the Air, yet when let out of the Vein it wou'd coagulate before three Days time; That all the Muscles, Bowels, Brain, Cerebellum and Medulla Spinalis are dryer than usual.

1141. The Cure has hitherto, if you except a few Cases, been very doubtful and unsettled, and not only the Therapeutic but also the Prophylactic; The First and chief reason of this is the vain boasting of having many specific Remedies; and then the Neglect of a Method, which might be deduced from the known Nature of the Disease.

1142. As much therefore as we may conclude from this whole History of the Disease, and comparing it with others, and with the happy Event of a few Cases, it seems first to be, a nervous Case which most properly ought to be ranked with Convulsions, which invade the Bowels and

their Vessels; That from hence a Defect is communicated to the Blood and Humors, which is very much resembling a gangrenous Inflammation; and that the Seat of this Evil is first about the Stomach and neighbouring Parts.

1143. The Method to preserve one that is bit from farther Harm, requires, 1. That immediately after the Poison is communicated, the whole affected Place, together with the Surrounding, be immediately scarified very deep, and Blood be drawn to a great quantity, by Means of large Glasses laid over the scarified Parts; or the same be burn'd deep with a red-hot Iron; then the Part be made to suppurate for a long while by Means of such things as ulcerate by their constant corrosiveness; In the mean time, from the beginning of the Cure to the end, foment the Parts with Pickle made of Bay-salt and Vinegar; And these things ought to be continued till over the sixth Month from the first Accident. 2. The Clothes, and other things, which may have been touched with the Poison, or that the mad Animal has breathed upon, ought to be laid aside and carefully avoided. 3. Immediately after the Infection is known, he ought to be thrown and hurried into great Frights, using even violent Threats, to be thrown unawares into the Sea or River, to be held some time under Water, and dipp'd again, repeating this several times with the same Circumstances: For that this Submersion cures no other ways than by the prodigious Disturbance it occasions in the Spirits, and not by the quality of the salt Water, is too well known from what has happen'd

happen'd to those poor Wretches, who in helping to hold a Patient in this Case under Water were bit by him; For they have not escaped the highest degree of Hydropobia, notwithstanding they wou'd fall to Swimming and to Ducking in salt Water for many Hours from the moment they felt themselves bit, thinking thereby to prevent all harm. 4. Let him be made to sweat every Morning fasting, by giving him some spiced Vinegar, with Bay-Salt and plenty of hot Water. 5. Let him wash and bathe daily his Hands and Feet, his Head and Mouth, and swim often. 6. Let his Diet be moist, light, loosening; forbearing the use of too many Aromatics, Wine, heating Means, and also too great Motions of the Body or Passions of the Mind.

1144. But the Cure of the Disease already present ought to be attempted, and chiefly in the First Stage, and the beginning of the Second (1138.) the more because the least Neglect is attended with a very fatal Event. It looks the most promising, and it is confirmed with a few Examples, that the following Method is like to Succeed best and ought to be taken. 1. Immediately after the first Signs of this Evil's invading (1138.) it ought to be treated like a Disease of the fiercest inflammatory Kind (890.) Letting blood out of a large Orifice of a large Vessel to a large Quantity, and even to Swooning; then giving Glysters made of nitrated Water, moderately salted, with a little Vinegar: These must be repeated boldly, and even more than Prudence wou'd allow of in most other Diseases: In the Intervals of these he

must be blinded and thrown into a cold Pond, or be made wet with the continual throwing of Water upon him, till he doth not seem any more to be afraid of Water, or but little; Then immediately upon this force him to drink a large quantity of Water, and procure him Sleep at Night, no otherways than by fatiguing him into it by those Means: Let his Diet be very thin and always moistning.

1145. And as this Method is built upon the nature of the Illness in all its Circumstances, and upon all the reasonable Rules of the Art; so it seems nothing is more destructive than to Murder as it were, and tease these poor Sufferers with sharp heating, drying Medicines, and by their roughness very much affecting the Nerves, which are all Poisons in this Case where the Patients are already dried up by their very Disease: And again, nothing is more Cruel, than neglecting all Means whatever to abandon these poor Wretches from the beginning, or to stifle them between two Beds.

1146. Nor ought we yet to despair of finding out one time or other a peculiar Antidote for this Poison, seeing we have succeeded in Poisons thought formerly as destructive.

1147. But hitherto we have not met with any one, which deserves credit enough to be entrusted with the Life of People thus miserably afflicted, for no one is known whereof the Experiments be certain, but they owe their Birth either to Speculation, or they have been copied from others, and taken upon trust; *Not Excepting here the Secret*

of burn'd Crabs of *Æschrio*, mention'd by *Galen* and *Oribasius* ; nor the famous Electuary of *Scribonius Largus*, so cried up for being infallible in the Madness of the *Sicilians* ; Nor the Advice of *Peregrinus*, of putting on the skin of the Monster called *Hyæna*, nor of the Ashes of River Crabs with the *Theriaca* of *Andromachus* cried up by *Aëtius*, *Rufus*, and *Posidonius* ; Nor the Secret bragg'd of by *Palmarius* ; Nor the too much exalted Pewter with Mithridate by *Mayerne*, *Grew*, and most Hunters ; Nor the Root of *Cynorrhodon* reveal'd in holy Dreams ; Nor the famous earthy ash-colour'd Moss call'd *Lichen* ; Nor *Pimpernel*, the burn'd Liver of the Mad Dog, and the like : For whoever doth rely on these magnificent Trifles will find himself deceived. NB. " Upon " this Disease see among the Ancients *Cælius* " *Aurelianus*, and among the Moderns, *Martin Lister*.

Of the Scurvy.

1148. The Scurvy is a Disease very common to all Nations that inhabit the Lands near the North Seas, is the cause of a great many others, is neither new, nor has not been over-look'd by the Ancients ; Though they have not left us a very exact Description of the same ; which ought to be imputed to their being incapable of long Voyages by Sea, because they wanted the Compass, and that they were unacquainted with most Nations that do inhabit the coldest Climates of this our Earth.

1149. This

1149. This Disease, as it often deceives by its many and various Symptoms, cannot be made known any better way, than by narrating its whole Course, and then concluding upon its Nature and Genius.

1150. It rages in *Britanny, Sweedland, Denmark, Norway, Lower-Saxony*, and the *Netherlands*; so that it chiefly infects the Northern Nations, and such as live in the colder Climates; and among them chiefly such as live near the Sea, Fenny and Overflown Lands by Salt-water, Marshes, Lakes, Pools and Clay-lands, in Low-lands behind Dikes and High Causeys that keep the Waters out: It chiefly afflicts the idle, unactive People, such as undergo cold in Rooms paved with Tiles or Marble Stones in Winter weather (which is very common in *Holland*) Seafaring People, who live upon salt and dried Meat, Biscuit, Putrid Waters with Worms at Sea or on Shore; and also such as delight too much in feeding upon Water-fowls, Salt-fish hardned and dried either in the Wind or in Salt, Beef or Hogs-meat pickled or dried, or upon unfermented meally Food as Peas, Beans, Salt, sharp and old Cheese; such as are much subject to Melancholy, Madness, the Spleen, Hysterics, or any other long Diseases: And chiefly such as have taken too much of the Jesuits Bark. NB. "It wou'd be too much to
 " say that the Jesuits Bark doth never do any
 " harm, even when it is given properly; because
 " some Constitutions are very tender, and cannot
 " bear its roughness in Substance; but yet it is
 " as wrong to accuse it of so many Mischiefs as
 " Dr.

“ Dr. Sydenham and our Author doth here; I
 “ came to *England* very much prejudiced against
 “ the constant use of it, but I protest that I am
 “ entirely recover’d of that prejudice, and think
 “ now sincerely, that there is hardly any one Me-
 “ dicine in Nature which is capable of so many
 “ good, and guilty of so few ill Qualities; and
 “ particularly in this case I absolve it, as being ra-
 “ ther able to induce into the Blood an evenness
 “ of Mixture and a solid Contexture, than to
 “ break the same, which we shall see anon is one
 “ of the most obvious Causes of the Scurvy.

1151. And when it doth Invade those, it com-
 monly begins, increases, and arrives at its height
 with the following Steps and Phænomena;

1. An unusual Laziness, Stiffness, an Inclination
 to sit and lie Down, a Spontaneous Weariness
 all over, a General Heaviness, a pain of the
 Muscles as after too great a Fatigue, chiefly
 in the Legs and Loins, a great difficulty in
 walking chiefly up or down Stairs, and in the
 Morning upon first waking in all the Limbs
 and Muscles a sense of Weariness and a Smart-
 ing.
2. A difficult, panting, and almost deficient breath-
 ing upon every little Motion; A Swelling of
 the Legs coming and going, and an unmove-
 ableness of them from their weight; Red, taw-
 ny, yellow, purple Spots there; a pale tawny
 colour in the Face; a beginning Stench of the
 Mouth; the Gums swelling, painful, hot, itch-
 ing and bleeding upon the least Pressure: The
 Teeth bare from the Retractions and Looseness
 of

of the Gums; Various and wandering Pains all over the External as well as Internal Parts of the Body, causing wonderful Torments resembling Pleuresies, Stomachic, Iliac, Colic, Nephritic, Cystic, Hepatic, Splenetick, Pains, &c. several sorts of Hæmorrhagies but slight ones.

3. A rottenness of the Gums stinking like dead Bodies, an Inflammation of the same dropping Blood and a Gangrene; the Teeth grow loose, yellow, black and rotten; The Veins under the Tongue have varicous, ring-like Swellings; Hæmorrhagies frequently mortal, through the very external Skin of the Body, without any apparent Wound, through and from the Lips, Gums, Mouth, Nostrils, Lungs, Stomach, Liver, Spleen, Pancreas, Guts, Womb, Kidneys, &c. Ulcers of the worst kind and obstinate, giving way to no Medicine whatever, easily gangrening, dispers'd in all Parts, chiefly in the Legs, and sending forth at the time of dressing a Stench, which subsists long; Scabs, Crusts, a dry and gentle Leprosie; The Blood, when drawn out of a Vein, is black in the fibrous part, grumous, thick and yet loose and broken, in the serous part salt, sharp, full of a yellowish green Mucus on its surface; Violent gnawing, stabbing, and quickly piercing Pains, increased at Night all over the Limbs, Joints, Bones, and Bowels; and livid Spots up and down.

4. Fevers of all Sorts, hot, malignant, intermitting all manner of ways; uncertain, periodical, continued, occasioning an *Atrophia*; Vomiting,

ings, Loosenesses, Bloody-Fluxes, sharp Stranguries, Faintings, and often suddenly mortal Anguishes : A Dropſie, Conſumption, Convulſions, a Trembling, Paſſie, Contractions of Sinews, black Spots, vomiting of Blood and voiding the ſame in great Quantities by Stool; a Putrifaction and waſting of the Liver, Spleen, Pancreas and Meſentery; and a quick Contagion to all other Parts.

1152. From whence it appears, that the Nature and Effects of this Diſeaſe are eaſily gather'd from the Conſideration of what went juſt before.

1153. And that its proximate Cauſe is that Conſtitution of the Blood which is faulty and peccant, of too great a Thickneſs in one part, and at the ſame time of a ſharp, ſalt thinneſs of the acid or the Alkali kind in t'other part : Which two Phænomena are above all things to be duly weigh'd and diſtinguiſh'd.

1154. And that from the Knowledge of theſe, (1151.) all the different Phænomena of this Diſeaſe, though never ſo wonderful, may be deduced eaſily.

1155. Which will ſtill more clearly be made out from the Rules which the proſperous or unhappy Event has eſtabliſhed, whereof the following are the moſt material.

1156. In this Diſeaſe, the thick Humor muſt be made thin, what is ſtagnating render'd Moveable; and what is ſticking together made Fluid.

1157. And alſo, what is too thin muſt be made more compact, what is too ſharp be ſoftned; both in general and particular.

1158. And

1158. And in the Correcting of the one, regard must be had always to the Nature of the other (1156, 1157.) So that there is occasion for the greatest Skill in Physic to treat this Disease with Success.

1159. Sharp evacuating Medicines do always exasperate this Disease, and often render it incurable.

1160. So that one ought to begin α . In the sort described in (1151. N^o. 1.) First with a gentle, attenuating, opening Purge, given often but in a small Dose. β . The attenuating and digesting Medicines must be continued. γ . And then ought to be used the gentlest specific Antiscorbutics for a long while in all Forms and Shapes. δ . and such a Diet is all the while to be exactly kept, contrary to the Causes described in (1150.)

1161. When the Disease is in its Second Degree, (1151. N^o. 2.) Then will be of Service all things mention'd in the First (1160. α . β . γ . δ .) And besides, the Scorbutic Medicines endow'd with somewhat a greater degree of Sharpness, in the form of Juices, Conserve, Spirits, Sal. Volatil, medicated Wines or Beer : Outward Bathings also, and washing of the Feet in Antiscorbutic Decoctions ; hot and dry Frictions, or with the Liquors of the Specific Plants ; Letting of Blood may often be profitable to carry out at once part of the acrimonious Juice, to lessen the Gnawing of it upon the too much distended Vessels, to procure a Revulsion, and to make room for such other Medicines as may be given Inwardly.

1162. And

1162. And in proportion as the thinness is sharp, the heat and fear of Hemorrhagies are greater; or as the thickness, sluggishness, coldness, and paleness of the Vessels greater; the Physician ought to prescribe Specifics, that are moderately adstringent and cold; or hot and somewhat sharp.

1163. And to correct the Defects in the Mouth usual to this Sort, such ought to be made use of, as are Antiphlogistic, Antiscorbutic, and at the same time peculiarly proper to each particular sort of Scurvy.

1164. In the Third sort (1151. N^o. 3.) all the aforesaid are useful, but that the Patient ought at the same time to take large Quantities of soft, easily circulating Liquids, contrary to Putrifications, Antiscorbutic, together with a gentle promoting of Sweats, Urine, and Stools for a long while together.

1165. As to the Fourth sort it seldom admits of a Cure; the Method of Cure is to be varied according to the variety of Symptoms; Mercurials are sometimes useful, and also those advised in (1164.)

From all which (1148. to 1166.) duly consider'd and compar'd with the Phenomena of the Disease and of dissected Bodies, it is evident, that to obtain a happy Cure of this Disease, it is above all necessary to find out the Nature of the vicious Humor, and each peculiar Acrimony which is preccant by its predominancy; And as this Acrimony is either of a briny Salt, of a rough Acidity, or a fætid Alkali, or rancid oleous Quality; and that we have already more than once treated
of

of all these in general and particular, it is easie to have recourse to it, and to form Rules to this peculiar Case : And it is evident also, why Milk-whey, Butter-milk, Physicall mineral Waters have so often cured this Disease after it had been given over for incurable, and also what Sorts of Scurvy met with this happy Fate at last ? Why and when the acid Juices of ripe Fruits, of Oranges, Citrons, Lemons, Pomegranates, Sorrel, great and small, Vinegar, Rhenish and Moselle Wines, have so often proved Specifics in the Cure of this Disease ? Why austere Adstringents, such as Rhubarb, Dock, Tamarisc, Capers, rough black Wines or red Wines, and some Preparations of Steel have often also proved successful, and when ? And why again the roughest and sharpest Aromatics, Scurvy-grass, Pepper-wort, Mustard-seeds, Aaron-root, Radishes of all sorts, Pepper, Ginger, the Less sharp Houseleek, The alkaline volatile Salts, the fixed, oleous, aromatic, and saponaceous of a mixed Nature, Why only these are often profitable ? Why what is useful to one Scorbutic Body must prove destructive to another ? So that a true Physician ought not so much to mind the general Denomination of this Disease, but to apply himself to cure the several Kinds, as if they were Distempers of quite a different and contrary Nature. “ NB. *Cambden* in his *Britannia* in the “ Description of *Kent*, mentions a Memorable “ place out of *Pliny*, where he speaks of the “ *Britannick Herb*, which I take to be *Scurvy-* “ *grass* ; He says, that *Cæsar's* Soldiers were “ seized with a Disease called *Stomachace*. Soon “ after

“ after they had drank of the Water of a Fountain which they dug up at the Mouth of the Rhine; which he describes to have been an Affection of the Gums, which made all or most of their Teeth fall, and afterwards caused a weakness of the Joints and the Knees.

Of a Cachexy, or Ill Habit

1166. By a Cachexy is generally understood that disposition of the Body, which depraves its Nourishment through the whole Body at the same time.

1167. And consequently acknowledges for its Cause, either any depravation of the Nature of the nourishing Liquid, or a defect of the Vessels receiving them, or a defect of that Faculty which is to apply them to the Extremities of the said Vessels.

1168. The Depravation of the Liquids ariseth,
 1. From all Things taken inwardly, which are not capable of being made like unto the last Particles which they are design'd to restore by the Power which doth execute that Alteration in us; such are Aliments of meally matters, Peas, such as are coarse, fibrous, fat, sharp, watry, and tough. (69.) Bodies that cannot be digested at all, as Turf, Cynders, Chalk, Sand, Tobacco-Pipes, Lime, &c. 2. From a defect of animal motion in lazy, idle People, and such as sleep too much. 3. From the very vitiation of the Organs by too great a Weakness, (41. to 44.) or too much Strength (50. 92, &c.) or a defect of the Liquids themselves not easily to be amended (60. 69. 76. 106, 107. 406.): This may be occasion'd
 Y by

by many; as all too great Secretions of whatsoever Nature; Vomitings, any sort of Looseness, Bloody-Flux, all Hæmorrhagies, a schirrous defect of a particular Bowel, &c. Or the Retention of any Humor which ought to have been secreted.

1169. And it is manifest, that these Causes, once præ-existing, do act either by lessening the Solids or embarrassing them with liquids incapable of passing freely: Whence a twofold Effect of this very remarkable Distemper, *viz.* a Consumption, or a Leucophlegmatia, and a general Dropsie of the Muscles in the surface of the Body call'd Anasarca.

1170. And several sorts of Diseases will be produced as effects of a Cachexy according to the different color, bulk, tenacity, sharpness and fluidity of the engaged Liquids, *viz.* a whiteness, paleness, yellowness, lividness, redness, greenness, blackness or tawny colour of the Skin; a heaviness; a swelling under the Eyes and of the thinnest Parts; a bloating and watry swellings of the Parts remote from the Heart; a Palpitation of the Heart and Arteries, much increased upon the least motion; Crude and thin Urine; spontaneous Sweats entirely watry; And lastly, a Leanness, or a Leucophlegmatia and a Dropsie.

1171. A general defect of the Vessels, which are to receive and transmit laudable nutritious Juices, can scarce be supposed or imagined; yet may their too great Contractility and Laxness, and the Defects thence following, be admitted for Causes: of which has been treated from (24. to 58.)

1172. The universal Nutrition is interrupted by a Defect of the power which applies Nourishment,

ment, if the circulating force be too languid or too violent. (92. to 107.)

1173. So that the Diagnostick of the Disease is pretty easie, and the Prognostick is made out from the consideration of the Cause, Duration, Effects, and Degrees of the Disease.

1174. And it doth even appear, that the Cure doth always require, 1. Sometimes a Softning of the too great sharpness and moderate thickning of the too great Fluidity. 2. A Dissolution and Fluxility of what is too tough or sticking. But as these two may proceed from so many Causes (1168, 1169, 1170.) it will be above all things necessary to alter and diversify the Medicines and Method of applying them according to the variety of those Causes.

1175. Care ought chiefly to be taken, that the Patient's Diet be of such as are most like unto the healthy Juices, easily passing, contrary to the peculiar Cause of the Disease, and as are most agreeable and grateful to him.

1176. Then that the same may be very well digested, must be procured with Sauces, Wine, Exercise, and convenient Air.

1177. And care ought to be taken that the Organs of the first Concoctions may also be well disposed, with gentle Digestives, or a Vomit, or a Purge or such Medicines as do strengthen their tone; as is "*Decoctum amarum, cum vel sine purgantibus; Elixir proprietatis Parac. Tinctura Sassafras, Martis Myrsichti*, and the like.

1178. And after the Passages are somewhat loosened by the Use of those, and the morbid Matter

shall be something attenuated, then you ought to insist on attenuating Diuretic or Sudorific Medicines.

1179. Lastly, use Chalybeats, Alcalies, Saponaceous Medicines, together with the Exercise of Running, Riding, Frictions and Bathing.

1180. And all these may be chosen from many and prepared many ways, and applied according to the known proximate Cause.

1181. But when a Consumption or a wasting from this ill habit of Body is already occasioned by too great an Acrimony; The Physician ought to inquire into the peculiar Kind of Acrimony, if possible, 1. By finding out the Cause of the Cachexy (1168.) 2. The Nature of the Disease, the particular Constitution of the Patient. 3. The Symptoms. 4. And of the Excrements.

1182. When those are known, they are to be corrected by their opposites. See (1166.)

Of the Empyema.

1183. When ever there is a Collection of Pus between the Lungs and the Pleura in the Cavity of the Chest, it's call'd an *Empyema*.

1184. Which always supposes the breaking of a purulent Vomica, whose fallen Pus is received into the Thorax.

1185. Such are the Vomicæ, 1. Of the Lungs from their Inflammation (820. 867.) from a spitting of Blood, and from a Matter unfit to flow impacted therein. 2. Of the Pleura, from an Inflammation of the same (875.) from a slight Wound given from without, closed on its outside too soon, and breaking inwardly, (298.) from a Bruise

a Bruise of the same, or a conceal'd Rupture, turning into an Imposthumation (324.) 3. Of the Diaphragm inflamed, suppurated, and broke on its superior Part towards the Chest (907.910.) 4. Of the Mediastinum affected after the same manner (877.) As also lastly, 5. Of the Pericardium it self. (877.)

1186. It is known to be coming, 1. From the Inflammation of those five Parts (1185.) not being quite removed by any Coction, Revulsion, Crisis, or Medicines, but ending with uncertain Shiverings, a little Fever troublesome at Night, an uncertain Heat, a heaviness instead of Pain, difficulty of Breathing, loss of Appetite and a Drought. (See 833. 892. 910.)

1187. It's known to be already present, 1. From the twentieth Day since the Inflammation began, without a Purgation of the same. 2. From the Signs of a Vomica in any of the said (1185.) Parts disappearing. 3. From a new Pain, Cough, difficulty of Breathing and Spitting, breaking out and soon again vanishing. 4. From a dry Cough, a heaviness upon the Diaphragm, the lying upon one Side only, a noise and rattling of the Pus upon Motion, a slow Fever, red Cheeks, hollow Eyes, a heat at the Fingers ends, the Nails growing crooked, and the Swelling of the Belly.

1188. The Effects of this Evil are, 1. A continual accumulation of Pus out of the broken Ulcer, which was neither heal'd nor cleans'd. 2. An Exacerbation, Putrifaction, Stench and Thinning of the same from its being detain'd in a close, hot, moist place, and continually moved. 3. An

Impediment in the lifting up of the Diaphragm, and in the extending of the Lungs : Whence a blowing, difficult, and streight Breathing, a fear of being choak'd upon lying down, an impossibility of lying upon the sound Side, a continual dry Cough, and an Anxiety or Anguish. 4. A Maceration, Corrosion, and into a destructive liquid Consumption of the Lungs, Pleura, Diaphragm, Pericardium, and of the Heart it self ; whence a small Hectic Fever with a quick, small Pulse, a redness in the Cheeks, a continual Drought, want of Appetite, a great Weakness, and Swoonings. 5. Hence a disability and unfitness of all the Liquids for Nutrition, Circulation, Secretion, and Excretion ; whence a Consumption, Atrophy, a resolution of the Fibres, a putrifaction of the Liquids, and their Rejection even through the corroded Lungs, or a mortal sanious Belly-flux, with Night-consuming Sweats after Sleep, Pimples in the Face, crooked Nails, a shining Yellowness, and an hippocratic dying Countenance and Visage.

1189. The Cure of this is different according to the variety of the Cause and the Degrees and State of the Disease.

1190. For, 1. As soon as it is known that there is a Vomica in the Lungs, Pleura, Diaphragm, Mediastinum and Pericardium, which is discover'd by its proper Signs in (834, 835. 893. 910.) Endeavours ought to be used forthwith to break the same, and to make the Discharge outwardly ; which may be accomplish'd by Burning, Launcing, Medicines or sufficient and proper Motion.

1191. 2. When it is certain, that the same is already broke, (302. 836. N°. 4, 5. 894. 910.) then ought the Pus to be discharged from the place it fell upon. *α.* By the Mouth, if Nature doth shew that way. *β.* By Urine, if in the same there appear Signs of a discharge of Pus in some promising Quantity. *γ.* By an Opening of the Chest, made with a proper Instrument on the affected Side, between the 5. and 6. or the 4. and 5th Ribs, reckoning from below, and tapping the Pus slowly and by intervals, and cleansing the Cavity of the Thorax sometimes with honey'd Water, and then closing the Wound with the Prudence recommended in (303.) *δ.* Giving at the same time inwardly vulnerary, cleansing Decoctions, and such as resist Putrifaction in pretty large Quantities.

1192. If the Pus be white, smooth, equal, void of stench, not colouring the Probe at its taking out; if the Patient be free from Fever, Drought, Looseness, has an Appetite and digests kindly, is healthful in all other respects, and the Air be hindered as much as possible to enter into the Thorax; There is hopes, that the Patient may recover entirely. (304, 305.)

1193. But if the Pus be tawny, ichorous, stringy, fætid, colouring the Probe with a fiery colour, bloody, coming out all at once with violence; The Patient is in a very great Danger, for he'll either die instantly, or be soon consumed.

1194. If the Mediastinum has been eat through, and that the Thorax be open'd, the Patient is generally instantly suffocated; “ by the Air pres-

“sing upon all the Lungs at once with a greater
 “force, than that, which comes in at the Wind-
 “pipe, can overpoise.

1195. If the Empyema is of an old standing, the Strength decay'd, the Hair falls off, and a colliquative or melting Looseness presses hard, the Body wears away; If then the Operation of the Empyema be made, it only serves to hasten Death.

Of Consumptions from Ulcerated Lungs.

1196. If an Ulcer has so far eat through, or into the Substance of the Lungs, that the whole habit of the Body be thereby consumed; The Patient is said to be in a Consumption of the Lungs.

1197. The Origin of which Ulcer is deduced from any Cause, which is able to stop the Blood in the Lungs, so as to be changed unavoidably into a purulent Matter.

1198. These Causes may be reduced, 1. To that very *Constitution* of the Body which occasions the Patient first to spit Blood, and changes the Wounds of the Lungs into an Ulcer: This Constitution we find *a*. In a tenderness of the Arterial Vessels, and the impulse of the Blood when acrimonious any way; It is known by seeing the make of those slender and tender Vessels, and of the whole Person; by the length of the Neck, a flat and narrow Chest; depressed, low Shoulders; The Blood being very florid, thin, loose, sharp, and hot; a very white, fair Complexion with rose Cheeks; a shining Skin; a gay temper

per and too forward acuteness of Wit and Understanding. β . In that weakness of the Bowels, which occasions those Aliments, which of their Nature are too tough, to create Obstructions, Putrifications, and to grow acrimonious, and by these ill qualities to ulcerate the destroy'd Vessels after a preceeding spitting of Blood : It is known by a small Fever, a dry Cough, an increased Heat, a redness of the Lips, Mouth and Cheeks increased and apparent about the time that the new Chyle doth enter into the Blood, by a propensity to Sweats upon Sleeping, a Weakness, and great panting upon the least Motion. γ . At that age when the Vessels having reach'd to their full growth, do resist a farther endeavour of the Liquids to lengthen the same, while the Blood is increased in quantity, sharpness, strength of motion, and consequently between the Years of 16. and 36, and earlier in Girls than in Boys, because their arriving sooner to their full growth. δ . In hereditary Dispositions : Hereto refer what has been said in 24. 26. 29. 38. to 41. 44, 45. 48. 60, 61. 64. 69. 72. 82. 84. 86. 100. 106.) for those compared with the Circumstances just mention'd do explain, define, foretel, the Nature, Causes and Effects of Blood-spitting ; and those Circumstances of that Effect, (*viz.* spitting of Blood) are hasten'd. 1. By the Interception of all the usual Excretions, chiefly of Blood ; such as the Piles, Monthly Courses, Cleansings, bleeding at the Nose, Omission of Bleeding at usual times, chiefly in plethoric People, and such as have lost some Limb. 2. By any great force upon the Lungs, either

either in Coughing, Hollowing, Singing, Running, great and forcible straining of the Body, violent passion of Anger, or any Wound occasion'd by any sort of Instrument or Weapon. 3. By a Diet of salt, sharp or aromatic Meats; Drink of the like Nature, way of Living or any other Disease, whence the quantity, sharpness, quickness, rarefaction or heat of the Blood is augmented; and this is the reason, why this Symptom is so frequent in acute Fevers, the Plague, Small Pox, and Scurvy.

1199. It arises from all those (1198.) Causes with a slight Pain, a moderate Heat, and a narrow pressure of the Chest; The Blood issuing out is generally florid, of a fine Scarlet frothy, with a Cough, a noise and rattling in the Lungs, mix'd with some small Fibres, Membranes, arterial, venous or bronchial Vessels; with a soft, small, waving Pulse; a Panting; and a salt Taste perceived before the spitting of it up.

1200. It is cured, 1. With a large Bleeding every third Day, repeated to four times, or till the Inflammatory Crust has entirely disappear'd. 2. With cooling, thickning, stiptic, softning Medicines, long continued and mixed now and then with gentle Balsamics. 3. Directing the six Non-naturals, so as to make 'em contrary to the Causes (of 1198.): Chiefly with a very temperate and soft way of Living and Dieting always observ'd: to which a Milk Diet doth peculiarly belong. 4. Correcting the Specific Nature of the Cause or the peculiar Disease, which has occasion'd it.

1201. When

1201. When it has once happen'd and has been suppress'd by those means, the Patient ought to be let Blood every six Months for some Years together ; yet lessening the Quantity at each time, that it may be left off at last almost insensibly.

1202. But if, because of the Greatness of the Evil (of 1198.) or of Styptics untimely applied, or the neglect of that true Method proposed (in 1200.) there doth arise a shortness of Breath still encreasing after the spitting of Blood, uncertain Shiverings ; a heat and redness of the Cheeks, a small dry Cough, a Hectic Fever, a greater Drought, a Weakness, a sense of heaviness in the Chest ; It denotes that the Wound, out of which Blood was spitted, has already begun to change the Matter about its Lips, and the Blood dried under a Crust into Pus, and that this Collection is passing into a conceal'd Bag, which broke, doth terminate into a manifest Ulcer of the Lungs.

1203. 2°. This Collection of Matter doth also besides the Causes mention'd (in 1198.) arise from any Inflammation of the Lungs terminated into an Imposthume (832. to 843. 867.) and is known from the Signs there laid down.

1204. 3°. And it is even possible that an Empyema (1185.) shou'd gnaw, melt and consume the Lungs, so that the same Disease follows, as if it had been occasion'd by an Ulcer first bred in their Substance (1188. N°. 4.) And that may be known from the Signs there mention'd.

1205. Whence it is evident, which are the Signs to know an Ulcer of the Lungs by, even of a Conceal'd one, and how many Causes there be of the same,

same, and how many sorts, and consequently how many different kinds of Consumptions.

1206. Now the Effects of an Ulcer of the Lungs already made, but yet conceal'd by the Name of Vomica, are pretty much such as follow : The Sharpness, Quantity, Putrifaction of the Pus increase daily ; The Membranes, which do contain the same, are daily dilated, eaten and made thinner ; The Blood and bronchial Vessels are converted into Pus ; The whole Lungs or one of its Lobes is consumed into Pus also ; A continual dry Cough, or one that continually rubs off Spittle with its shaking and forces it up, attends the Patient ; all the Blood running upon the Ulcer is turn'd into Pus, the Vomica gains ground every Day into the substance of the Lungs, and that breaks at last into the Pipes of the Larynx ; Sometimes the Patient is choak'd at once with the breaking and issuing forth of the Pus, or voids the same daily in great quantities with a Cough, and it generally sinks and runs together when spit out in a Bason with Water, it is sweet, fat, fætid, white, red, yellow, livid, ash-colour'd, stringy, and when thrown into the Fire it smells of roast-meat. Then a breaking and an emptying of the Vomica into the Cavity of the Chest, whence Breathing is rendred very difficult, and all the Symptoms (1188. N°. 4.) of an Empyema do appear. Then is Breathing worst of all ; all the Blood and Chyle is converted into Pus ; The Preparation of the nourishing Juice (usually perform'd in the Lungs) is destroy'd, most all the Solids do entirely consume ; a Hæctic Fever with
a small

a small and languid Pulse, a troublesome sharp heat in the upper Parts, glowing Cheeks, an Hippocratic Face, an unexpressible Anguish chiefly towards Evening, a great Drought, large overflowing Sweats in the Night, red Pustules in the Face, and about the Neck and Breast, a swelling of the Hand of the affected Side, a great Weakness, a Hoarseness, a falling of the Hair, an Itching all over, with watry Pustules; a Looseness with yellow, fætid, purulent, cadaverous Matter, pressing hard with almost a continual Motion to go to Stool, and spending the Spirits greatly; a suppression of Spittle and Death; whence these Rules are easily drawn.

1207. 1. An Hereditary Consumption is the worst Sort of all, nor to be cured but by preventing the spitting of Blood by the same Method as it is cured in others.

2. A Consumption occasion'd by spitting of Blood from an external Cause without any previous inward Defect, is the lightest, if all Circumstances be alike.

3. A Consumption (of N^o. 2.) in which the Vomica is suddenly broke, when the expectorated Pus is white, well digested, even, easily brought up, answering in quantity the largeness of the Ulcer, without Drought, with an Appetite, good Digestion, Secretion and Excretion, is difficultly but yet curable.

4. A Consumption of the Lungs from an Empyema is incurable.

5. Heavy, solid, stinking, sweet Spittle, with the last Signs of (1206.) ought to extinguish all hopes of a Cure.

1208. When there is already a Vomica form'd in the Lungs, the Intention of the Physician ought to be, the Ripening of it as soon as possible, and then to break it : Which is executed by a Milk-diet, riding on Horseback, lukewarm Steams, and expectorating Medicines : When it is broke, then it is requisite,

1. To fence the Blood against the purulent Contagion.
2. To empty the Ulcer of its Pus forthwith and to cleanse and heal up the Lips of the same.
3. To allow such Nourishment as requireth the least Concoction, that they may not only flow through, but also be changed by the remaining power of the Lungs ; But yet solid enough to be capable of nourishing the Body and unqualified to make more and new Pus.

1209. The First Intention is satisfied with the help of Medicines of a gentle and pleasant acidity, saltness, of vulnerary Herbs, gentle Balsamics, given in all Shapes in great Quantities and continued long.

1210. The Second by Liquid, and Diuretic Medicines, that promote coughing, whether Internal or External ; By Riding and Country Air ; Then by the Help of balsamic Cleansers both Internal and External ; and healing up at last by virtue of consolidating Paregorics.

1211. To the Third belong Ptisanes, Broaths, and all things made of Milk

1212. As to the palliative Cure of this Disease it regards chiefly the Cough, Oppressions, and Looseness.

1213. Which

1213. Which may be eased with a proper Diet
(1211.) Opiates administered prudently, and warm
Liquids.

Of other Sorts of Consumptions.

1214. As Consumptions are mostly occasion'd
by Ulcers in the Lungs, There are some also
that owe their birth to Ulcers of the Liver, Spleen,
Pancreas, Mesentery, Kidneys, Womb, Bladder, &c.
The Knowledge, Prognostic, Effects, Cure and
Palliation are easily drawn from the distinguishing
Marks of each particular Bowel of which no good
Physician ought to be ignorant.

Of a Dropsy.

1215. When watry Serum is shed out of its
Vessels and received into the Cavities, or when
stagnating somewhere it distends its Vessels too
much, it is called *a Dropsie*.

1216. Which may consequently take place
wherever there are such serous Vessels, that is,
in the whole habit of the Body, and in each par-
ticular part thereof.

1217. Hence the Hydrocephalus, from a ga-
thering of Waters between the very external In-
teguments, between them and the Cranium, be-
tween the Cranium and the Meninges; between
the two Meninges and the Duplicatures of them;
between them and the Brain; between the Fold-
ings of the Brain, in the Cavities or Ventricle
of the same; and yet the Patient may not
die suddenly.

1218. It

1218. It is easily known ; the last Kind is incurable, the others may be cured, by burning slightly, trepanning, puncturing prudently and slowly, using at the same time inwardly such Medicines as purge the Waters, and afterwards do strengthen both the Blood and Vessels ; or some may be dissipated by such as do discuss externally.

1219. In the Dropsie of the Chest, which is apt to collect Lympha from several parts, we may observe almost the same Signs as those of an Empyema ; but the observation of the antecedent Cause doth shew the difference of the Disease and how to distinguish between them. This Dropsie is cured by the Opening of the Chest, using at the same time those Things which are contrary to its Cause, and are able to remove it.

1220. The Lungs also have been experienced to have fallen into this Disease by admitting either watry Bladders, or even a dropfical Bag by the accumulating, and shedding or receiving Water in their larger Sinusses ; which Disease is certainly difficult to know and to cure, unless some other present Signs do by chance put the Physician upon the administering of Medicines proper for the Cure of this Dropsie ; “ Which is certainly but a Chance, because its Symptoms are “ so like those of other Asthmas from other “ Causes.

1221. And even the forepart of the Aspera Arteria which is in sight, collecting the Lympha by the help of any power apt to stagnate the same, doth often shew us a sort of Bronchocele, (a watry
try

try swelling in the Throat like a Rupture;) which as easily known is generally cured by a Puncture made therein, with discussing and diverting Medicines; If observed as Authors do mention.

NB. " Our Author seems to doubt of the Existence of such Swellings, because he never was " farther than his native Country *Holland* : But " he would have seen them very common in " *Switzerland* and in many other Countries, " where People drink Waters that have a great " mixture of melted Snow amongst them; which " are generally cured by Dissipating, drying Medicines and drinking of Wine.

1222. The Follicle of every Glandule may be invaded with the like Distemper, which is there curable after the same Method.

1223. A very remarkable sort of Dropsie doth also occupy frequently the Ovaria in Women, chiefly the barren and advanced in years, it is but difficultly distinguish'd from an Ascites, and hardly ever without an Anatomical Inspection; It is never cured, but often changes into an Ascites.

1224. And even in the very Cavity of the Womb, by its Internal Orifice shutting very close, is often so much Water collected that the whole Belly is as much swell'd as in a true Ascites; which Disease is also difficultly known because of several doubtful Signs, which seem to indicate the Patient to be with Child: It is to be cured by relaxing the Mouth of the Womb with Fomentations, Steams and such Medicines as operate most ly upon the Womb.

1225. Whenever this same Lympha doth stagnate in the whole habit of the Subcutaneous Fat, or is there deposited, there ariseth that sort of Dropsy call'd *Anasarca*, *Upofarca*, and *Leucophlegmatia*, which extends it self also about the Abdomen and Scrotum.

1226. While that same Water is collected within the duplicature of the Peritoneum, in the Cavity of the Abdomen between the Peritoneum and the Bowels of the Abdomen, or in the dilated Cavities of the Glands or Vessels contain'd in the Abdomen, it is call'd an *Ascites*, and also a *Tympany*, if it be puff'd up from rarified Steams, Water, Pus, Ichor, and Air, which are here lock'd up, kept hot, and thence putrify.

1227. The Dropsy of the Testicles or Hydrocele is, 1. That of the Scrotum ; belongs to (1225.) is known by feeling, by an apparent transparency, and the pitting of the same after pressure. 2. That of a Bag, from the production of the Peritoneum, bred in a true Rupture : happens in a violent Ascites ; it is known from an Ascites or Tympany having preceded ; from the Vanishing of the Swelling upon pressure, lying upon the Back with the Buttocks rais'd higher than the Head, and upon the voiding of the Waters out of the Abdomen ; from a sudden increase often and decrease of the same without any apparent Cause ; from the Figure of the Tumor not unlike a Gut-pudding from the Scrotum up through the Groin. 3. Of the peculiar Sheath and outward Membrane of the Testicle : it happens, if the Humor there separated is not resumed again
by

by its proper Vessels, but stagnates, is accumulated, and often extends it Bladder to an immense bulk; Or if the same be there collected from the said Vessels being either broke or obstructed; The Inflammation, Suppuration or Ichorous Collection does often appear like this sort of Dropsy in the Testicles. It is known from the Tumor not being Elastic, not giving way, hard, and produced slowly; from the absence of the Signs of the First and Second kind of Hydrocele; from the round Figure of the Tumor, or at least Oval; from a manifest Transparency, if, upon bending the Scrotum all round, the bag of collected Lympha held to a Candle is seen to be clear and transparent like an Egg: But whether besides these there be also such a Tumor between the Tunica Nervea and the very Substance of the Testicle, or even in its very Substance, is not so certainly determin'd, is hardly discernable from the preceeding Kind, and is perhaps not to be cured but by Castration. All these come under the common denomination of Hydrocele.

1228. It has been observed, that all these Diseases are produced by all Causes, which are able, 1. To restrain the serous Liquid, so as not to be able to return into and through the Veins, but is forced to stagnate in the extended Vessels. 2. To break the Vessels thus as to be shed and spill'd between the Membranes. 3. Or to obstruct the Vessels which return the same from the Cavities so greatly, and so little move the Liquids already deposited in the Cavities, that the same are neither exhaled nor resorbed by the Veins.

1229. Which Causes have been observed chiefly to be an hereditary Disposition common to a whole Family more or less : too much and sudden drinking of cold Water not brought away or dissipated either by Vomiting, Stools, Sweats, or Urine, promoted by Heat, or proper and sufficient Motion : Acute Diseases, chiefly the most ardent Fevers either with or without an unquenchable Thirst, though never so much eased with plenty of Liquor : A Bloody Flux proceeding from the Spleen long continued : All obstinate Obstructions of the Bowels, as a Schirrus of the Liver, Spleen, Pancreas, Mesentery, Kidneys, Womb and Intestines : A Jaundice : A violent and long continued Quartan Ague : A Lientery : a Diarrhæa or long Bloody Flux : Cæliack Passion : “ (in “ which the Aliments run through very little altered, and without supplying the Blood with “ any part of their nourishing Parts.) An Empyema : A Consumption and the Gout : All too large Evacuations, and chiefly those of arterial Blood : the Drinking of sharp and strong fermented Liquors : The dieting and living upon tough and hard to be digested Food. Large and many watry Bladders hanging in the Cavity of the Abdomen, and many more like Causes, as Melancholy, Scurvey, &c.

1230. The Effects of this Disease and its Progress are pretty near as follows : The Feet swell, chiefly towards Night, this Tumor increaseth gradually both in bulk and limits : then doth the Abdomen swell and grow bigger daily ; In a Tympany the same will sound when beat upon, There

is a Noise of floating Water in the Ascites, from the Water being let loose in the Cavity of the Abdomen ; but it deceives in that sort of Ascites when the Water is yet contain'd in some Bladders and Bags : Then comes on Difficulty of Breathing, Drought, a Heaviness, Sluggishness, Costiveness, spare Urine, a slow Fever, privation of all Sweats, a Leanness which is greater in proportion as the Swelling is grown : Then you shall see Waters gathering in the Thighs, Scrotum, and between the Skin of the Abdomen ; watry Bladders, an Acrimony of the Water stagnating and putrified by its tarrying in a hot and close Place ; Ulcers, Gangrenes, Bleedings at the Nose, a kind of Rupture or a Protuberance of the Navel, a Sphacele of the Bowels, and then Death.

1231. The Cure of a Dropsy therefore requireth, 1. To procure a free Flux to the Lympha, whether it be Water, bilious, ichorous or bloody Serum. 2. To draw out the Waters that are already extravasated and fallen loose into the Cavities. 3. To remove the Defects of the debilitated Bowels, whether those have been the Cause or the Effects of the Dropsy.

1232. A free Flux is procured to the Lympha by removing the Causes which hindred the same. Which are, 1. The vital Strength not sufficient to make that circulate duly. 2. The compression, disruption and obstruction of the Vessels. 3. The too great tenacity of the Liquids.

1233. To the First (1232.) do contribute all things call'd Cordials, that are strengthning and stimulating ; which are taken, unless there be a

great Drought attending, from the warm Aromatics, Salts and Oils, in the shape of Electuaries, Mixtures, medicated Wines, medicated Beers, Pills, Decoctions, Syrups and Lozenges, according to the Palat and Desire of the Patient, as much as the Nature and Composition of Medicines can bear, without losing any part of its virtue.

1234. But if a troublesome Drought attends, and the Cause of the Disease be hot, and the same be also attended with a hot Fever, which often happens, then in the room of those just now commended, substitute those Cordials that are refreshing by their grateful Acid, and are of the gentlest Aromatics.

1235. In both (1233, 1234.) Cases are useful Frictions, Motion and Heat.

1236. To the Second Intention (of 1232.) diligent Search must be made after the Cause that makes the Vessels narrower, that obstructs or breaks them, which must be removed, if possible, (1229.) or must be often amended with Mineral Waters.

1237. The too great toughness of the Liquid will be resolved in the hot and cold sort of Dropsy, (1233, 1234.) 1. By those Remedies there mention'd. 2. By Alkaline Salts chiefly, not only Volatil, but more effectually by fixed ones. 3. By Preparations of Mercury and Antimony, and others used in Venereal Cases, chiefly of the Chymical Kind, if well prepared and applied with all the Sagacity that able Physicians shou'd be Masters of.

1238. The Waters when fallen into the Cavi-

ties are fetch'd out thence, 1. By a Paracathesis. 2. Making new Out-lets. 3. By Urine. 4. By Vomiting. 5. Purging by Stool. 6. Dissipating.

1239. If the Cause of the Dropsy of the Belly be recent, and come on suddenly from an external Cause, Strength entire, the Patient young, the Bowels sound, nor ill affected with any other Disease, the Waters not yet putrified, nor stagnated long in the place, Tapping must be resolved on immediately.

1240. Which make three Inches below the Navel, and the same distance from the *Linea alba*, which measure is understood to be taken as in a healthy Body free from a dropfical Swelling, for which the Operator must allow in proportion as it is farther from the natural Shape; it must be made on the Side opposite to the original Seat of the Distemper, that is, if the Dropsy took its rise from a Defect of the Liver, the Operation must be perform'd on the side of the Spleen, and so on the Contrary, &c. The Puncture must be made with a proper Instrument, and a Tube be introduced and be taken out again; The Water must be tapp'd in a small quantity at a time, twice a-day, spending at least fifteen Days in emptying the whole; and all the while those Remedies must be administred recommended (from 1233. to 1238.)

1241. If the Conditions of (1239.) are either not present but on the contrary some opposite to those; Then ought this Operation by no means to be allowed of, for it will only hasten Death,

and bring blame and reproach on the Operator, or the Physician who advised it.

1242. Emissaries or Issues and Setons made with a red-hot Iron, Caustics, Spanish Flies, Launcet or a Needle and coarse Thread, in a fleshy depending part, have often been of great advantage, chiefly if the Nature and Degree of the Illness permits to keep them open.

1243. And as many Examples are mention'd of Dropsies cured by Diuretics, we ought also to try that Method, if Nature doth shew us the way, Exhibiting urinary, fixed Compound, some Specific Salts, prepared from Animals, Vitriol and others from some dissolved Metals, all which are said to be Specific for the Kidneys.

1244. By Vomiting are resolved all the tough Liquids, the obstructed Parts are shook, the stagnating Matters are drove out, whence they are of admirable use in this Disease. NB. " This must
" be understood to be useful in the beginning be-
" fore the Waters are yet let loose into the Ca-
" vities, for then it more weakens the Patient
" than it voids any of the extravasated Waters.

1245. But they ought to be given Strong, repeated often and without any long Intervals between each : " Otherways you only open the
" Passages and fetch out nothing ; Give therefore
" boldly ten Grains of Tartar Emetic at least
" every other Day : Sydenham used to give an
" an Ounce and a half of *Infusio Croci Metallo-*
" *rum* every Day for three Days together.

1246. And these very Vomits will at the same time Purge by Stool, when they work usefully

two Ways, and even a Third, for they generally free the Neck of the Bladder of its obstructing Load, and make a Passage for Plenty of Urine.

1247. The Waters are purged off by Stool, if Strong, quick Purges be given, and often repeated; “ Let the same be Liquid as much as possible, because they’ll find their Way easier to exert their stimulating power on the Intestines, “ whereas dry Purges may be buried as it were “ in the tough slimy Matter, with which they “ then abound. With our Author, agree *Sydenham* and *Lister*; But among the Ancients *Celsus* was of Opinion, that the Physician ought “ first to begin with gentle Purges, to measure “ the Belly daily and to enlarge the Dose gradually, if he finds it answer.

1248. The Waters may be *dissipated* by the heat of a Fire or Stove, Oven, Sand, Sun, Salt or Dung, which is encreased as long as the Patient can bear, and till it throws him into a large Sweat, or a Diaphoresis. NB. “ The famous *Dampier* in his Voyage round the World tells of “ himself, that when a long continued unwhole- “ some Air and Diet had brought a Dropsy upon “ him (I take it to be an *Anasarca*) and had been “ set on Shore in the Isle of *Californi*a, that he “ had buried himself (all but his Head) into “ Sand heated by the Sun-beams for about half “ an Hour, that he was carried thence to his Bed, “ cover’d with many Clothes, whence he fell in- “ to so profuse a Sweating, that from that time “ he began daily to mend, and was at last perfectly cured. This *Dampier* had read probably

“ bly in some ancient Author; and how com-
 “ monly it was used by 'em, may be seen in *Mer-*
 “ *curialis*, and others.

1249. It may be done besides with abstaining for a long while together from all manner of Drink, living upon Biscuit, with a little Salt, and now and then a Spoonful of Mountain or Canary. The celebrated *Capivaccius* of *Padua*, has left us the History of a Patient of his, who was cured by him, “ Whom he affirms to have abstain'd “ from all Drink for two whole Years together, “ and had taken no other Aliments than Biscuit. “ 'Tis probable that he had something allow'd “ him, or found out something that did delude his “ Drought: As *Lister* reports of a Woman, who “ was also cured of a Dropsy by the same Me- “ thod, but had of her own accord ingeniously “ found out means to *fallere Sitim* with a morsel of Bread, which twice a Day she used to “ dip in Brandy, keeping it in her Mouth, and “ thereby keeping the Glands of the Mouth from “ closing.

1250. The Third Intention (of 1231.) is answer'd chiefly by Chalybeat Wines, Steel in Substance, Strengtheners gently adstringent given in a due Dose and Season; a dry Diet; generous Wine without Water, which are old, adstringent; and all these help'd with Exercise.

1251. A Tympany is cured by the same Method and Means, if it took its rise from rarified Steams of extravasated and putrified Humors, for then it is removed by the removal of the Cause: But if it owed its birth to Air fall'n into Cavities through

through the Membranes of the putrified Intestines, not able to return back, but rarified more and more through the heat of the Body, then do all things by the help of this very Air corrupt very soon, and the evil from this Cause is almost always incurable: So that a dry Dropfy is always reputed much more incurable than a moist one: The Paracentesis has eased sometimes, but seldom cured; A bandage next to that may be used to bind the Belly and to ease it thereby.

1252. The first Sort of Hydrocele (1227.) is cured, if, 1°. The Anasarca its parent be cured first. (1231. to 1238) 2°. By the Remedies (of 1248.) 3°. By the most powerfully discussing, and at the same time strengthening Medicines, apply'd to the very Scrotum, and put into a greater Motion by a constant external Heat. The following Cataplasin is incomparable. *R. fol Asar. Ellebor. nigr. Taba. aa ʒiij. Bryon. ras. ʒj. Coque ex aqua vel facibus vini vel Cerevisiæ fort. Admiscendo sub finem Galban. solut. ʒiss. ol. Junip. 3j. M. pro Cataplasmate.* But the Second sort (1227.) will be best cured. 1. If the original Rupture is first well cured by a skilful Surgeon. 2. If the Matter of the Ascites be carried off and its Fountain drain'd. (1238. to 1252.) 3. Then pressing upon the Groin with convenient Machines, as in Ruptures with Bandages: but it is seldom that a Dropfy which has gone so far is entirely cured. The last sort (1227.) will be cured, 1. By giving strong Purges often repeated, and keeping to a drying Diet. 2. By the strongest Discutients and Corroborating Applications. 3. By piercing into

into the Scrotum. 4. Applying Caustics, and causing the Part to digest well.

1253. Whence it is evident again, That in the Cure of Dropsies the greatest Difficulties arise more from the nature of the Waters putrified in the places where they stagnate, than from its first Causes? and Reasons may be given, why, when those putrified Waters are tapp'd off, or otherways evacuated, those Parts that were floating in 'em do sooner gangrene than they would have done otherways? Why upon letting out the Waters too suddenly out of the Chest or Abdomen, the Patient instantly dies or at least faints away to a surprise? Why dropscal People are commonly so drougthy? and what this Thirst means? Why Acids are so often beneficial in that Disease? ("I remember a young Lady at the *Hague* who was cured of a Dropsie by eating a great quantity of Cherries by the advice of our Author. Why after strong and great Evacuations of the Waters the swelling of the Belly does not only remain, but even increafe? And why this Swelling falls soon upon giving a sufficient Dose of Laudanum?

"I cannot forbear mentioning here *a Dropsie of one Legg*, which a worthy Clergyman much afflicted with the Stone, at this time under my Care for both, doth labour under, partly owing its rise to the Scurvy, which he has contracted in Sea Voyages, and partly in *Ireland*; but, I believe, chiefly to the obstruction of the Kidney of the same Side with the dropscal Leg; He never felt any Nephritick pain on t'other Side

"till

“till three days ago, when he was seized with
“a most desperate Fit of the Stone lodged in that
“Ureter; and time will shew whether I shall be
“able to prevent the Dropsie falling also in that
“Leg: I have conceived some hopes of success
“from having very near conquer’d that of the
“first; and the more because that what will cure
“the one Disease is also very proper for t’other.

Of the Gout.

1254. The Gout is a painful Illness chiefly seated in and about the Ligaments of the Bones of the Foot and its Joynts, invading mostly in the Spring and Autumn.

1255. Which, when it doth run undisturb’d its own natural Stage, is the Companion usually of People past the middle Age, the Male Sex, Men of acute and deep sense, such as do exercise the same much, and protract their Studies late in the Night, such as live voluptuously, drink much of generous strong Wines, chiefly at Night; such as have been much addicted to Venery in their younger and unripe Years, large, broad and full habited Men; such as are too much addicted to Acids; as cool their sweaty Feet too suddenly; as sweat in wet Stockings or Shoos; hence such as do hunt or ride much in cold Weather; such as have it from their Parents, or lie much with gouty People.

1256. The Season, Age, and other Circumstances which perform the part of Causes (1256.) and then the Phænomena, Beginning, Progress, Effect and Termination of this Disease being altogether

together well weighed and comprehended, do demonstrate what Causes the Physician ought to form to himself to determine his Judgment in the Cure of this Disease.

1257. For before this long hidden and lurking Disease shews itself in its repeated Paroxifms you may observe such People, that it will invade, to be afflicted with Crudities and Indigestions, Belchings, Heaviness, flatulent Sluggishness, Costiveness, the Interception of the usual sweating of the Feet, and the swelling of the Veins in the same.

1258. All Errors committed in the Nonnaturals, whence Crudities are form'd, are apt to hasten and bring on the Fit when little expected; so that immoderate Venery; Sitting up; Debauchery; the Eating of Hogs-lard and the like; Overfatigue; Great Passions; the taking of a Purge only, moist, cold, tempestuous Air and Weather, all these are very contrary and Enemies to gouty People.

1259. The place which it commonly first and regularly invades, is always the Foot, and chiefly those Parts of the same through which the Liquids flow the most difficultly; as the Periosteum, Tendons, Nerves, Membranes, Ligaments; such as are the remotest from the Heart, and such as are the most pressed or pinch'd.

1260. When these Parts (1259) are at length shut up by Obstructions, Tumors, or any Matter cramm'd up there, or that the Matter of the Gout by any Power whatever is thrown and dispersed into other places, it does lay hold also of some other parts, yet so, as to obsess the same places

places and the same parts ; that is, Periosteum, Tendons, &c. (1259.)

1261. The Patient is immediately sensible of a stretching, tearing, straitning Pain, gradually increasing and decreasing again, with a moistness, redness, tumor ; ended with a Diaphoresis, keeping warm in Bed, an itching, a skinning ; or changing into a chalky Substance which breaks the Vessels.

1262. From all which it appears, That the proximate Cause of this Disease is a vitiated temper of the least, and consequently nervous Vessels in the Body ; and also of the Liquid, which waters those nervous Parts.

1263. And moreover, that this Liquid here is defective by its Acrimony, and by its over-toughness ; and the solid Vessels by too great a Narrowness and Stiffness.

1264. Whence it shews it self in places the most distant from the Brain, as resisting Motion the most, because of their solidity, hardness, exercise and the weight incumbent upon 'em.

1265. Now the nearest origin of this Defect (1162, 1163.) is from an indigestion of the Bowels, which do not sufficiently attenuate or assimilate the Aliments into a Substance, fit to supply the Nerves with Juices proper for 'em, which do require a most elaborate Concoction.

1266. The reason whereof may again be fetch'd from remote Causes (1255. 1258.)

1267. It supposes therefore that almost all the Functions of the several Concoctions are vitiated to produce this Disease, and that with a Defect
scarce

scarce perceivable in the larger Vessels, or in their Liquids.

“ NB. I cannot possibly go on farther without
 “ returning Thanks to our Author for having here
 “ furnish'd a very late and new Writer at *York*
 “ with a Text to write an Elaborate Treatise up-
 “ on, and at the same time much applaud the
 “ said Writer with his good Taste in chusing so
 “ good a Plan, and commend his Abilities in pa-
 “ raphrasing and enlarging as well upon it, as if
 “ he had taken it from our Author's own Mouth
 “ in his Lectures at *Leyden*; I cou'd only wish,
 “ that as he has not been covetous in his Quo-
 “ tations of other great Men, and even of such as
 “ make yet a living Figure in *London*, he had not
 “ forgotten to do homage to my Master, and had
 “ named him Cap in hand, at least once; That
 “ wou'd have excused his being so far a Plagiary
 “ as even to transcribe entire Sentences, and those
 “ the most remarkable in his whole Book; which
 “ you meet with throughout his Treatise; but
 “ I refer the Reader chiefly to the last and fifth
 “ Chapter; which shou'd have been the First,
 “ but that in all probability he wou'd hide his
 “ Theft, or shew us another Miracle of the Horse,
 “ whose Head stood where his Tail shou'd: I
 “ shall not put down his Name here out of mere
 “ Charity, hoping he may mend.

1268. The Cure therefore is impossible, unless wrought by such Medicines as are able to amend these Defects entirely. So that the Gout has hitherto been reputed incurable by Ancients as well as Moderns, if you except a few Quacks and boasting Empirics in all Ages.

1269. That which is Hereditary and breeds Chalk-stones is the most difficult of all to cure, or even to ease.

1270. From the same may be gather'd, that Bleeding doth not reach either the Matter, Seat or Cause of the Disease : Yet that the same may be beneficial sometimes by chance causing a small Revulsion and lessening the urgent Powers mentioned in (1257.)

1271. And that Vomiting or Purging doth not effect so much here, as is generally hoped for from 'em ; That they often raise a tumultuous motion of the Nervous Juice, withdraw and drain the most liquid Parts, and weaken the expelling Faculty.

1272. That the Sudorifics artfully administred are of greater use.

1273. And that nothing can be more prejudicial in this Disease, than to hinder the matter of the Gout, now sufficiently stay'd, nor safely to be educted any other way, nor to be corrected, from flowing freely to its proper Places, and chiefly to such as are in Pain already, and as are the least dangerous. For if the same be retain'd and hindered, it creates Apoplexies, Palsies, Deliria, Weaknesses, Sleepiness, Tremors, Convulsions all over, if it has turn'd upon the Brain ; Asthmas, Coughs, Suffocations, if upon the Lungs ; a fierce and Convulsive Pleuresie, if upon the Intercoastal Muscles or Pleura ; Nauseating, Anguishes, Vomiting, Belching, Gripes, Contractions of the Bowels, if upon the Entrails of the Abdomen, and I do not know how many more wonderful and often suddenly

dently Mortal Diseases : Which a Physician unacquainted with the first occasion of them, shall in vain endeavour to cure with Means never so proper and effectual on all other occasions : for they'll not give way, unless you bring on a New and a smart Fit of the Gout, and fix the same in its proper and safe part. This Damage and Mischief will be occasion'd by the imprudent application of Narcotics, Coolers, Constringents, and Thickners; or by the giving of any weakning, evacuating, revelling, or suffocating Remedy : Hence is this often occasion'd by Bleeding, Purging, Vomiting, Plaisters, the just named Cataplasms, and all Opiates; or also the spontaneous Weakness of decrepid old Age; Or from all the external Parts being thus obstructed, dried, corrupted, destroy'd, that the morbidic Matter can no longer pass through them : Hence it is plain which sort of Gout, what sort of Symptoms in it, and why it doth at some times Kill?

1274. Therefore the Cure, which the due Consideration of the Disease and Experience has commended, is effected, 1. By restoring the lost Vigour in the Bowels (1265.) 2. By the carrying off of the corrupted Liquid flowing yet in the Vessels, or stagnating in the places assign'd in (1262, 1263.)

1275. To the first relates α . The Use of aromatic, bitter, antiscorbutic Plants, chiefly taken in substance bruised with a little Honey. β . The Use of Lixivious fix'd Salts taken in small Doses, but long together and often. γ . Aliments of the nourishing light kind that are easily digested. δ . Great,

d. Great, continued Exercise of Riding in a pure Country air, and Frictions and Motions of the Parts often repeated. e. Going to Bed early and lying long in the Morning.

1276. To the Second (1274.) will be useful,

1. Any volatil Salt taken long but in small Quantities, in the Morning some time before he rises, with a large Draught of some softning Apozem, and thereby promoting a gentle Breathing or Sweat for about an Hour together. 2. Warm Frictions with dry Cloths. 3. Repeated Doses from time to time of such as purge Waters acuated with Calomel or Mercurius Dulcis, and adding towards Night an opiate quieting Draught.

1277. With which Medicines and Method much good is done even in the chalky and noxious Gout.

1278. To temperate the raging pain of the Parts, it may be often allowed upon urgent Occasions to use internal Opiates, a great quantity of Milk-whey, or such like thin cooling Drink, but drank warm; And externally some emollient Cataplasms or Fomentations, or Anodynes applied hot, or even whipping the Part with Nettles, or anointing with Therebinthinated Balsam of Sulphur, or burning with Moxa, " or a Match or " any actual Fire, held at a distance till you " raise a large Blister, which must be cut to let " out the Matter.

1279. Which otherways the Physician ought not to be too busy with, for thence he may reasonably fear to harden the Part sooner than it wou'd otherways, and to deprive it of Motion,

chiefly in People that have had the Gout some years, and are pretty well advanced in years.

1280. But that is to every one, and in every sort and degree of the Gout the greatest Remedy, which is the most opposite to the Cause it took its rise from first, (1255. 1258.)

1281. But if the Signs be present of the Gout being turn'd inwards (1273.) you must without delay attempt to drive it back again into the Joints: Therefore immediately apply large Blisters to the Thighs; to the Parts that used to ake, apply lukewarm salt aromatic Fomentations; Let him be bid to walk hard, or to be galopp'd stoutly in a Chaise; let him take a large Quantity of some sudorific aromatic Drink, or, if that will not do, of old Rhenish Wine; and when you have done this, and the Pains begin to invade the genuine places, let him be put in a warm Bed and sweat. " I have lately in this Case
" made a Patient of mine drink a Pint of burn'd
" Brandy with success.

1282. All which if any doth rightly consider, he'll see the great and almost insuperable difficulty in curing this Disease: and also the Reason why famous Physicians and Chymists have endeavour'd at finding its Cure in such things as renew the Blood and Juices entirely? Why Milk and which way it conduces to its Cure? Whether a Specific Acrimony made and formed in the Blood be the Mother of the Gout? What reasons may be given for the Nodes, Tophes, and Chalk of the Gout? Why it is easier upon the appearing of the Tumor? Why the Pain of the Gout doth at last entirely

tirely cease? Why, as long as the Pains are the most violent in the Fits, the same are shorter, and their intervals longer? Why when the Fits give over being fierce, the gouty People are hardly ever free from some Pain? Whether there be any alkaline Absorber, which may extirpate the Gout wholly? Why the Machine of *Sanctorius* be the best Director and Præfager of what will happen, and what must be done to gouty People?

“NB. I cannot help mentioning with due
“praise the two elaborate Treatises of Dr. *Musgrave* of *Exeter* upon the Symptomatic and
“Spurious Gout; there we find Observations
“carrying the face of Truth, and adorn’d with
“such excellent Prescriptions, as I have heard
“our Author applaud, when I was his Disciple.

Of Rheumatisms.

1283. There is a Disease ally’d to the Gout and Scurvey which is very common in *England*, and is call’d a *Rheumatism*.

1284. Which is preceeded by a sanguine Constitution infected with some sharp Defect, manly Age, plentiful Living, a sudden cooling of a heated Body, Spring and Fall, Transpiration interrupted, an inflammatory Disposition, but shewing it self slower than in a Pleuresie. It begins with a continual Fever, creates a most terrible, tearing pain increasing cruelly upon the least motion, long continued and fixed in one place, obsessing the Joints of any Limbs, but most particularly troublesome to the Knees, Loins and Rump-bone,

excruciating and invading sometimes the Brain, Lungs and Bowels, with a Tumor and redness of the place, and going off and returning again by Fits.

1285. If it lasts long and encreaseth, it often deprives the Joint after more horrid Pains of its Motion, and makes it stiff by an Anchylosis scarce removeable by any means whatever.

1286. Its proximate Cause seems to be an Inflammation in the Lymphatic Arteries of the Membranes which are about the Ligaments of the Joints, but not fierce enough to change into an Imposthumation. It is cured by bleeding, cooling repeated Purges always allay'd at Night with a Narcotic, gentle Bathing in warm Water, and antiphlogistic Fomentations to the Parts; Blisters applied to the Part, and even actual Cauteries; By such Medicines as do dilute much, and soften at the same time; a thin spare Diet; Rest; the warmth of a Bed, and towards the latter end by dry, hot Frictions, together with the use of Antiscorbutics.

1287. If fixing it self in the Loins it deserves the Name of a *Rhumatic Lumbago*, if in the Thigh-bone it is called the *Sciatica*, or the Hip-Gout; it is cured by the same Method and Means, though not so easily.

1288. Hence appears why this Disease is so frequent, and is seen in so many Shapes, and is very dangerous if it invades the Brain or Lungs; and why it is difficult then to find out the same, and also that there is great danger to be feared from the use of too hot Medicines. And lastly, that

the

the giving of Opiates too soon doth prolong the
 Disease. “NB. Our Author had forgot to treat
 “ of this Disease in his former Editions, and truly
 “ I never heard him make any mention of it in
 “ his Lectures during two Years, wherein I con-
 “ stantly heard him; Nor doth it seem to be a
 “ Disease much known, or at least distinguished
 “ by any particular Name in *Holland*, or most
 “ places beyond Sea, and consequently seems to
 “ be more peculiar to this Isle. Consult there-
 “ fore about its Differences and proper Cure the
 “ never to be forgotten Dr. *Sydenham*, and *Mus-*
 “ *grave*.

OF THE
DISEASES
OF
WOMEN *and* CHILDREN.

1289. **B**ESIDES all these different sorts of Acute and Chronical Diseases, there are some proper to Virgins and Child-bearing Women, to them when in Child-bed, and also to young Children.

1290.. About the time that the Body of a Female is arrived to its full growth, it uses to make a greater quantity of Blood in a good Constitution, than what the Vessels will contain, which is the reason why part of it is let out at the Ends of the Arteries of the Womb ; which Evacuation is called the Monthly Courses, or the *Menstrua*.

1291. If, the Body being constituted as in (1290.) this Blood be retain'd, there follows a Plethora ; a sluggishness, heaviness, paleness, a pain in the Loins, and Groin ; almost all the natural, vital and animal Functions are depraved ; all which Effects are easily deduced from the too great pressure of the Vessels, and the too great quantity of Liquor, which is forced to stagnate, and to be suffocated.

1292. From this Blood thus penn'd up, we shall often see most surprizing Veins open'd for a Passage, mark'd down by the Observators for wonderful Evacuations of the Menstrua; for the same has been seen by Physicians to force its way through at the Eyes, Ears, Nostrils, Gums, Salivary Glands, those of the Gullet, Intestines, Bladder, Breasts, the Skin, through particular Wounds and Ulcers.

1293. Or even all the Bowels will be much weaken'd thereby, and almost innumerable and quite different Diseases will arise partly from the putrified Liquids, and partly from the injur'd Vessels. (106.)

1294. This Disease is known, 1. From the Age. 2. From the Body being full grown. 3. A Plethora. 4. And the other Signs afterwards of the thence following Disease.

1295. It requires a different Method and Means according to the different Cause in each particular Subject.

1296. Among which there is sometimes a natural and sometimes an occasion'd defect of the Privy Parts, *viz.* their wanting an Orifice, which requires the hand of a skilful Surgeon making there a free passage with a proper Instrument.

1297. But when occasion'd from the stagnation of the Liquid, then it ought to be made to flow, 1. By fomenting and rubbing the Feet, Legs, and Thighs. 2. By opening a Vein in the Foot, and letting out a moderate quantity of Blood. 3. By giving Purges as will also work upon the Womb. 4. By administering Emmenagoga. 5. By Plaisters

to the Belly, Fomentations, Liniments, Steams to the Privy Parts, and received into the Vagina through a Funnel, and by heat. 6. By strengthening the very Vessels weaken'd by the Plethora with Chilibeats and Adstringents. NB. "It is impossible
 "to say any thing more to the purpose, and at
 "the same time so consonant with our Authors
 "Opinion than what we find in the excellent
 "Treatise of Dr. *Friend* publish'd some Years
 "since upon this very Subject, which is sufficiently meritorious to raise its Author to the
 "Pitch of those that have chose Subjects seemingly more sublime, but considerably less useful.

1298. Having removed by those means the Fountain of the Evil, all the Symptoms mentioned (in 1291, 1292, 1293.) usually disappear in course; or they are cured according to the nature of the particular Disease as they seem the most ally'd to; which is easily perform'd from and by the Rules heretofore laid down.

The Diseases of Women with Child.

1299. When a Woman is with Child she is afflicted with several Diseases, owing their birth to no other Cause than their Pregnancy.

1300. Whereof some do proceed from the menstruous Blood, being hindred from separating because of the closeness of the Womb, and the Foetus being not yet able to consume the Quantity convey'd thither for his Nourishment.

1301. Some from the very bulk and motion of the Foetus, Afterbirth and Waters, which do exercise their Powers upon that very sensible Part.

1302. From

1302. From the First (1300.) seem to depend the Nauseatings, Vomiting, the loss of Appetite, or the depraved and untoward Inclinations, fainting Fits, Vertigoes, violent pains of the Stomach, of the Share-bone, the Groins, Kidneys, Breasts, and a Laziness, Heaviness, difficulty of Breathing, and Miscarriages.

1303. All which therefore, as they proceed from one and the same Cause, may be cured by one Remedy, I mean letting of Blood in proportion to the time of being with Child, and of the Plethora.

1304. Taking a great Care not to do it in a wrong place, time, or quantity.

1305. Then are also useful a thin Diet, a gentle Motion, and small Drink.

1306. Sometimes do also avail much aromatic Cordials, together with the gentlest Antihysterics or some of the kindest Acids.

1307. From the increase and bulk of the Foetus seem to proceed almost all the same things as in (1302.) And besides the difficulty in making Water and going to Stool, the Piles, Swellings of the Veins and Feet, and of the Pudenda; and the Women are then also from that very reason prone to fall upon their Knees.

1308. Which may be help'd sometimes with Bleeding (1303.) or by changing the posture of the Body for some time, (chiefly lying down) then also by supporting the Belly with Swaddles, and the like, or anointing those Parts with softening Liniments.

1309. But of all the Diseases incumbent to Women with Child, none is reputed so dangerous as the flooding or *Fluxus Uterinus*.

1310. Which mostly is occasion'd by the Separation of the Placenta from the Body of the Womb, while the Arteries are full of Blood that dilates them, and when the Womb it self is much extended, whence the Blood necessarily runs forth, and gushes out with a full Stream.

1311. This is known to be the Case when the Orifice of the Womb is loosen'd, the Blood runs swiftly with a great Stream very much weakning, fresh or in Clots occasioning Pain.

1312. The Occasions thereof are violent Affections or Passions of the Mind, too violent Motions of the Body; The wrong application of Hysterics or unseasonable giving of such Medicines as provoke the Terms; or Blows received on the lower part of the Abdomen.

1313. Its Remedies are, a quieting of the Body and Mind; the carrying of the Patient into a cool Air; Bleeding in the Arm, Adstringents, or Opiates.

1314. If by these you gain no ground, the Child ought forthwith to be fetch'd away by a very skilful Hand, who knows how to place the Child in the easiest position for a quick Delivery, and who at the same time pulling out the After-birth frees the Womb as soon as possible of all present clotts of Blood.

1315. Nor is it any matter at what time of Childbearing this happens, it being more reasonable to let that Child perish, who even otherways has scarce any chance for his Life, and to save the Mother, than to delay this Operation till they must both unavoidably be lost.

Of a Difficult Labour.

1316. A difficult Labour happens either by the fault of the Mother or of the Child.

1317. The Mother is in fault, when she either wants Strength to thrust out the Child, or that her natural Parts are not duly form'd or prepared.

1318. When her Strength fails her, that ought to be repaired and increased with the help of Uterines, of Cordials, and such as promote Sneezing.

1319. If the internal Neck of the Womb is either too narrow or hard, you must help that with Liniments and Fomentations, that it may grow softer and glibber.

1320. If there be a Tumor in the Neck of the Womb or in the Vagina which shuts up the Passage, that must be discussed, brought to Suppuration, or otherways removed by the help of a skilful Surgeon.

1321. If the excoriated Lips of these Parts have grown together, they ought soon and before the time of Labour to be cut asunder and heal'd up again.

1322. If the Bones are too close and compact, and thereby render the Passage narrower, they must be softned with Liniments and emollient Fomentations, and the Hand of the Midwife or Surgeon must part 'em and push 'em back a little at the time of the Labour.

1323. 'Tis the fault of the Child, when that lies either dead and immoveable, or so situated, that it shuts the Passage by that very Situation.

1324. 'Tis

1324. 'Tis known to be dead, if it is unmoveable, if the Umbilical Arteries are felt to rest upon the Navel-string, and chiefly near the Body of the Child; If there comes from the Womb fetid Matters; If the Mother feels a greater dead weight than a little while before; If she has sudden and continual Motions to go to Stool; If she Faints away often; her Hairs stand on end; her Breath stinks much, and of a dead Corps; Looks of a livid Colour; If she is not deliver'd long after the Waters are all come away; If the Skin of the Child feels loose, and comes off easily; and his Bones are moveable and soft.

1325. As soon as the Foetus is known to be dead, it ought to be drawn out for fear of communicating a Gangrene to the Mother, throwing her into fainting Fits, Convulsions and Death; and that ought to be done by the Feet if possible, because there is the best hold, which is material, when the Child doth not help it self.

1326. The Position of the Child is to be directed so as to make its Delivery easie, which is either with the Head foremost, or better yet with the Feet.

1327. This is done, 1. By putting the Mother in a convenient Posture. 2. By changing the position of the Child if there be Occasion, &c.
 “ NB. This is only a general Idea of the Method of delivering Women. See all the Particulars at length in *Mauriceau's*, or *Dr. Chamberlaine's* excellent Treatises.

Of the Diseases incident to Women in Childbed.

1328. The Woman after Delivery is taken with Pains proceeding from the past Labour, the contusion of the Parts, from Blood, another Fœtus, or part of the Burthen left behind.

1329. When there is another Fœtus, or part of the Afterbirth, or clotts of Blood, all they ought forthwith to be taken out with the Hand.

1330. Afterpains are eased with Opiates so prepared as to be contrary to Acids, cordial and diluting; and also with external anodyne Fomentations to the Parts.

1331. Women in Childbed are sometimes brought very low by too large Cleansings, proceeding from the thinness of their Blood and Agitation, or most times from the Matter retain'd (1328.) in the Womb, which hinders its closure.

1332. If it be from Matter retain'd, they must be brought or fetch'd away (1329.)

1333. If from Passions, too great thinness or motion of the Blood, you must have recourse to Barley Gruels, Jellies, Emulsions, Opiates, and Adstringents.

1334. The Choice of which is directed by the Signs of the Disease, the Constitution of the Patient, and the Degrees of Danger.

1335. Whilst the serous milky Nourishment is making its way from the now contracted Vessels of the Womb towards the Breasts, there arises a small Fever, at whose coming, the Cleansings are sometimes entirely stopp'd, whence numberless Symptoms, and of the worst Nature, according

as

as the Matter thereof is carried and thrown upon different Bowels; Hence Phrensies, Pleuresies, Peripneumonies, Quinsies, Inflammations of the Diaphragm, Breasts, a worse of the Liver, Stomach, Caul, Mesentery, Spleen, Kidneys, and Intestines; Then Bloody Fluxes, Cholics, Iliac Passions, Apoplexies, Palsies, and a great many more Evils.

1336. All these vanish in course if you remove the Cause (1335.)

1337. Hence are requisite here gentle Antacids to allay the acid defect of the Serum; Soft Diluents from Barley-broths, Grewels, Almond-milk, and Flesh-broths; The gentlest specific Openers from the moderate Cordial hysteric Class; Then topical Aperitives, Glysters, Fomentations, Cataplasms, Plaisters, Liniments, Cupping-glasses, Pessaries, and Suppositories.

1338. Letting of Blood, ought not easily nor without the highest Necessity to be allow'd of.

1339. Nor are the Symptoms to be removed by the same Means as if they belong'd to other acute Diseases of their own Kind.

1340. When the Milk is already carried into the Breasts, it often stagnates and curdles therein, whence an Inflammatory Pain, an Impostume, a Schirrus, and lastly a Cancer.

1341. It's known by a Shivering, cold and heat returning by Fits, and succeeding each other, a Fever, and the Signs of a beginning Inflammation.

1342. It is cured 1. by gentle Alcalis and Terreous Powders. 2. the softest Diluters. 3. And by

by an external and timely Application of discussing Means.

1343. If it is tending already to an Imposthume, it ought to be ripen'd forthwith, to be open'd, cleans'd, and consolidate'd, of which see the Chirurgical Aphorisms in the beginning of our Treatise.

1344. The pain of the Nipples of the suckling Mother or Nurse, their Fissure or Inflammation is removed by the kindest Balsamics, or with the application of spirituous nervous Medicines; such as is Hungary Water with some Oyl to incorporate it.

1345. When the Milk abounds too much and is too thin, it may be temper'd with a soft dry Diet and reasonable Motion: When that is deficient it is supplied by a moist, soft nourishing Diet; fomentations and frictions of the Breasts, and by removing whatever doth appear to be the Cause of that deficiency.

Of the Diseases of Children.

1346. To new-born Children happen Diseases peculiar to them, 1. From the glutinous, caseous, and tough filth, wherewith their Mouth, Gullet, Stomach, and Intestines are fill'd and obsessed.

1347. From which Cause only arise Nauseatings, Vomittings, Gripes, Hiccoughs, and often Convulsions; and which afterwards are the frequent occasion of their not digesting their Aliments.

1348. It is easily cured by making them fast ten or twelve hours, by giving them a small quantity

tity of good stomach Wine with some Honey, given several times during this abstinence from other Aliments, or by giving at the same time the most gentle Purge imaginable.

1349. And in this Case do often wonderfully succeed external Applications of moderate Aromatic Oyls and Spirits to the Stomach, which by corroborating its Fibres do expel all that load of Slime and Phlegm.

1350. 2. They generally suffer much from a retention of the alvine Fæces, which from their blackness and resemblance of the condensed Juice of Popies are call'd *Meconium*, which should have been entirely expell'd soon after the Birth, but which the Child cannot effect because of his weakness, the hardness of the matter, its too great quantity and driness of the Intestines not yet lubricated with a glandular Juice designed by Nature for that purpose.

1351. So that from its Stay, and the admission of Air, there follows an Acrimony, Sharpness, Putrification and Resolution into Vapours, and consequently griping Pains, Convulsions, Nauseatings, Vomitings, Hiccoughs, Coughs, Sneezings, Cryings, Weepings, Wakefulness, Frights, Fevers, Wastings and Death.

1352. The defect of the Expelling Quality is remedied with a gentle stimulating Purge, a Suppository made of Honey, and a very agreeable and softning Cordial.

1353. The hardness of the matter is corrected by giving a Draught of fresh Milk-whey with a little Honey dissolved in it, a Glyster of Milk-whey and Castle-soap or Honey.

1354. The Intestines are lubricated by giving the Child Oyl of Linseed ; Olives, Sweet-Almonds, &c. and by giving them Glysters of the same, or anointing the Belly and Anus.

1355. By which Method and Medicines you may surely promise your selves to overcome all those various and dangerous Symptoms, which drew their Origin from that one Root in (1350.)

1356. But if any where it is here that Alcalies and Testaceous absorbing Medicines are very serviceable. NB. "Concerning the Use and Efficacy of them see Dr. Harris his Treatise *de Morbis Infantum*.

1357. Opiates ought seldom and not but with the greatest prudence to be made use of.

1358. And we ought also to avoid all such things as do attenuate and stimulate too much, or are too volatil.

1359. As to each particular Disease and Symptom (of 1350.) a Remedy is easily found, the History of the Causes and Methods of the Cure of all the Diseases heretofore described being once well understood and remembered.

1360. 3. They also suffer many Ills from the Milk itself, when that is too soon and too much coagulated and curdled in the Stomach, and is there kneaded together into one heavy and sharp Mass.

1361. For that same, being by degrees grown sharper and sourer, causes green Stools that smell sour, a continual vomiting of sour stuff; hence Gripes, Flatulles, Pains, and a great many more ill Symptoms, but the frequentest and the most

destructive to Infants are the Convulsions, " which
" here in *London*, and the Neighbourhood, kill
" so many, that the Bills of Mortality wou'd
" constantly be a Third less, if it was not for
" that Article.

1362. Which are cured with fixed Antacids, together with a small Dose of purging Medicines, the like Glysters, gentle Carminatives, Oils given internally, and outwardly applied.

1363. The Epileptic Fits besides seem to draw their Origin even from this Cause. The System of the Nerves being irritated by that vellicating Acrimony, which passing the first Vessels, has found Means to enter even the Cavities of the Nerves.

1364. So that if the same be curable, it ought to be cured by the very same Remedies as the other Convulsions in Children.

1365. 4. As soon as Children have got the better of these Diseases, and they begin to eat raw Meats, Fruits, Flesh, Cheese, and the like, they begin to be troubled with Worms.

1366. Their Cause and Origin they owe to Eggs of Insects, which live in the Air or the Earth, and which being swallow'd with other Aliments are not to be destroy'd by the small motion which the Aliments undergo in the Body.

1367. They find and make their Nest in the Slyme of the Intestines or Stomach, where they stick, are nourish'd, breed more, and grow larger.

1368. Hence are full grown People seldom troubled with them, unless they be of a heavy sluggish Temper and Dropsical.

1369. There

1369. There are some round, some flat and broad, and some very small call'd *Ascarides*; "Which I conceive lodge themselves in the Glands" wherewith the thick Intestines do abound.

1370. By their pricking they occasion Nauseatings, Vomittings, Loosenesses, fainting Fits; a small, deficient, and intermitting Pulse; an itching at the Nose, and Epileptic Fits.

1371. By the great Consumption they make of Chyle, they cause Hunger, a Paleness, Weakness, Costiveness, hence a Swelling of the Belly, Belchings and Fartings.

1372. They'll often eat even through the Coats of the Intestines.

1373. Which is the Cause of their proving frequently Mortal.

1374. They are known from the Age, Diet, Constitution of the Patient and their several Effects (1369, 1370, 1371.)

1375. The Cure is effected, 1. By destroying the Nest (1366.) with fix'd Alcalies, Slyme-purging Gums and Rosins, Mercurials, Antimony, and bitter Aromatics.

1376. Then by anointing the Belly externally with the strongest Aromatick Balsams, with an addition of Purging and oleous Ingredients.

1377. 2. By killing the Worms; which is done by the help of Honey, Salts, and such as the Worms cannot digest; bitter Aromatics, Mercurials, Acids, and Vitriol incorporated in Steel or Copper.

1378. 3. By driving them out alive or dead with bitter Purges, Phlegmagogues and Mercurials.

1379. Nor are Glysters, Suppositories, and external Ointments of small use here. NB. "Consult *Alexand. Trallianus* among the Ancients, "and *Andry* among the Moderns; the First "whereof has left a short but excellent little "Treatise, and the Latter has been very diligent in enquiring into the Nature, &c. of "this Disease.

1380. When the Teeth begin to appear, and chiefly those that are sharp and somewhat pointed, there arises an Inflammation, Tumor, Gangrene, Convulsions, green loose Stools, a Salivation, Fever, and even Death, from the tension, puncture and tearing of the Gums, which are very nervous and full of Blood-vessels.

1381. All which may easily be demonstrated to proceed from one and the same Cause.

1382. And all these Effects cease by Removing only the pricking of the Nerves.

1383. Which is effected 1. By softning, cooling, and asswaging the Gums with soft and glutinous Antiphlogistics. 2. By rubbing them with hard but smooth Bodies. 3. By laying the Teeth bare with the help of a Launcet.

1384. The Convulsions hereby occasion'd are happily remedied with moderate Doses of Spirit of Hartshorn.

Of the Small Pox.

1385. Because this Disease is most common to Children, we treat of it in this order. Whereof *Sydenham* has given so true and full an Account, that after ten times Reading, I have thought I cou'd
say

say little more about it ; and it appears from his very History that this Disease may also be reduced to the same Simplicity as all the former we have treated of : And also , that there is still a Deficiency in the Method of curing the same.

1386. It most times rages Epidemically, beginning first in the Spring, increasing with the Summer and hot Weather, more languid and less fierce in Autumn, and ceasing most entirely at the approach of Winter or cold Weather, waiting again for the Spring to be as general and proceeding in the same order as before. The sooner it begins in the Winter so much the fiercer, and the later so much the gentler will the Kind be for that Year. Hence it appears in what Season of the Year the Small Pox is most dangerous.

1387. It invades all Ages and Sexes, but chiefly Children, and those that hitherto have not had it: The more Age has dissipated the Humors, and has render'd the Solids compact : that is, The more People are grown, so much the more violent and dangerous is this Disease ; hence do more easily escape Children, Women, and those of a tender and lax Temper, and on the contrary a greater hazard attends Men, such as have been laborious and ancient Men or Women.

1388. This Disease, though Epidemical, yet is catch'd from another who had it first by a Contagion : Which at first seems to be in the Air, and to be transferr'd into the Lungs, Mouth, Nostrils, Gullet, Stomach and Intestines; and consequently has yet but a small share of a poysonous quality.

1389. This contagious Matter being mixed with the Humors doth immediately produce Effects that follow one another pretty near in the following Order and Method : A standing of the Hair, Stiffness, acute Fever, a great and continual Heat ; a shining and sparkling of the Eyes from a thin and hot Liquor faln therein ; a violent pain in the Head, Neck, Limbs and Back, chiefly towards the Parts that answer the position of the Pit of the Stomach ; Vomiting, Nauseousness ; great Restlessness, Dozing, Sleepiness ; and in Children Epileptic Fits.

1390. Blood let out of the Veins in that first State, appears fine, and like unto that of healthy People ; but on the second, third, or fourth Day it appears inflamed like that of pleuritic People, and so much the more as the Illness is of older Date and fiercer.

1391. This first State lasts more or less according to the various Epidemical Constitution of that Year, the violence of each particular Case, the Constitution of the Patient ; The longer it lasts of its own accord, so much the gentler is the whole Disease like to be, and so on the contrary.

1392. So that this whole Disease in this State (from 1375. to 1380.) seems to be an increased quickness of the Liquids, by an inflammatory stimulating Power dispers'd through the whole mass of Blood,

1393. So that this Disease (1380.) hath affinity with all acute Inflammatory ones, and in this State is but difficultly distinguish'd from 'em : But the Knowledge of its Epidemical Nature for
that

that Year, of the Patient's constitution who seems that way disposed, of the probability of his having contracted it by Contagion from his Relations, Servants, or Neighbours about him, and the Symptoms which have thereupon ensued such as in (1388.) All these together do shew that this Distemper is actually present, and that the Pustules of the Pox will infallibly break out and appear in the second State, whereof anon.

1394. When that first State of the Small Pox is certainly known to be present by what has been said (from 1385. to 1392.) This seems to be the most natural Indication ; That, having removed the Inflammatory Stimulus, this present State be so far cured as to hinder its passing into its second State or Stage, that is, the Suppuration, Gangrene, &c. or any other Consequences of the Small Pox in that second State.

1395. That Stimulus one may hope to remove by correcting it either with Specifics, or by the general Method to remove Inflammations and their Effects.

1396. The Specific Corrector ought to be some particular Medicine directly opposite to the Nature of that contagious Poison, which though received into the Body in never so small a Quantity, is yet able to produce all those wonderful Effects of (1388, 1389.)

1397. That such a Specific may one time or another be found we have some hopes, when we inspect the History of other Antidotes and see, how long some have remain'd unknown, and how their Production has been more owing to Chance than

than any design: And the great use it wou'd be of to Mankind in general, ought to encourage the diligent part of Chymists to go on in the Search for the Philosopher's Stone.

1398. And to seek for it in *some Preparations of Antimony and Mercury brought to a great degree of Penetrability, without being too corrosive by a saline Acrimony, but well united.* They ought to be encouraged from the Success that Medicines of this very Nature have sometimes met with in the Small Pox.

1399. The general Method seems also allowable in this Disease, and by repeated Experiments it appears, that those Things ought to be done and made use of, which have been found effectual in all inflammatory Cases, to prevent the Inflammation's passing into an Imposthume or a Gangrene: for as that succeeds in all other Diseases, no reason can be given why it shou'd not here, and you'll often find a Small-Pox Fever without any Small Pox at all breaking out; " And the Patient in
" all probability never be in danger afterwards of
" having them more than any other that has had
" 'em break out effectually: Which I do protest
" to have seen more than once, by having boldly
" follow'd the general Method here recommend-
" ed; but it ought seldom to be attempted in
" Children; the Success I have had has been in
" grown People.

1400. This Method must consist in the following Rules: 1. Let Blood after the manner prescrib'd in (854. N°. 1. 890. N°. 1, &c.). Loosen the whole Skin both outwardly and inwardly with

with Glysters, and Fomentations, Gargles and Drinks used in great and repeated Doses. 3. Make your Patient drink quantities of very thin Water-gruel, with some juice of Oranges, and salted with Nitre; Give him repeated Doses of *Nitre stibiata*, *Sal Polychrestum*, or *Mirabile Glauberi*, and Milk and Water to drink. 4. Let his Diet be of the thinnest; the Air, he breathes, coolish; his Body well cover'd so as to promote transpiration, but avoid throwing him into great Sweats.

1401. For though Physicians and Nurses do seldom think of this Indication in the Small Pox, and less still of this Method (1398, 1399.) Yet as mere Chance has frequently approved the same, when the Physician not aware of the Small-Pox, made use of it (which he wou'd have been afraid to do, if he had suspected it.) We see no reason why we shou'd not oftner attempt the same, notwithstanding the Vulgar Opinion of prejudiced Physicians and Nurses.

1402. When this Disease has run off its first Stage, which I call that of Contagion, it enters into its Second, which it doth after the following manner: The Skin first of the Head and Face, then of the Hands and Arms, and then of the Body and Lower Parts and Limbs is marked with small red points like Flea-bites; Thereupon all the Symptoms (of 1388.) do abate; The red Pustules encrease every Hour in Largeness and Number, they continually rise higher and higher, inflame more, the Skin is stretch'd; they begin to pain, to burn; the Circulation is interrupted, the Transpiration hindred; hence a greater return
of

of the Humors towards the inner Parts; a Fever arises, with Anxieties, difficulty of Breathing, a Pain in the Jaws, a Quinsie, a Looseness, Bloody-Flux; Bloody Urine, spitting of Blood; the parts of the Skin free from Pustules are red and inflamed, painful and hot; All which, or most of which, when they have lasted four, five or six Days, are now entirely suppurated and converted into as many small Imposthumes. Therefore I call it the Stage of the Inflammation until the Suppuration; It lasts (according to the difference of the Epidemical Constitution and that of the Patient, the greatness and violence of each particular Case, and the regimen hot or cold made use of) most times four or five Days; so that the Suppuration be compleated about the eighth Day, reckoning from the first beginning; and then is the Blood, when let out of a Vein, extreemly inflamed.

1403. If the first State of this Disease (from 1388. to 1390.) be violent, that the Pustules be many, very near to each other, intangled and mixed with each other, all the Signs of an Inflammation be great, the Patient's Constitution be of an oily saline Nature, he in the Vigour of his Age, has lived high, taken Medicines or Aliments much increasing the Motion of the Liquids; the Summer be very hot; Then towards the end of the Inflammatory course there appear little Bladders full of a reddish Lympha, signs of an approaching Gangrene (See 427. N^o. 5.) hence doth the Skin become unfit for Circulation and Transpiration; hence a forcible return of the Humors

mors upon the Internal Parts, hence a large Salivation, and a great Swelling of the Feet and Hands.

1404. From these may be learn'd the Diagnostics and Prognostics of the second State of the Small-Pox, and the rationale of it and all its Symptoms, which will be plainer still by the following Rules.

The gentler the State of Contagion, the easier also is the Inflammatory State.

The slower the Pustules break out, and the longer therefore the State of Contagion, the easier and kinder is the whole course of the Disease through all its Stages.

The fewer, more distant, bigger, more remote from the Face, whiter and afterwards the yellower the Pustules are, and the later they appear; so much the better Event do they promise.

The more in quantity, more mixed and intangled, the less in bulk those that stand single, the more they are upon the Face, tawny, or black, and the quicker they grow; so much the worse.

The more the Matter of the Pustules is like to kind and perfect Pus, the better.

The more the space between the Pustules looks red, is hot, stretch'd and swell'd about the time of their imposthumating, so much the greater hopes, because it is a Sign of the Circulation being preserv'd there.

The more that same space looks paler, or grows tawny, so much the worse; there follows a mortal Quinsie or Peripneumony; unless a thin Salivation, or a great Swelling of the Hands or Feet doth

doth ensue ; the reason is that the Circulation of the Liquors is cut off in these Parts, and drove back and increased in the internal nobler Parts.

If in the places between the Pustules there appear purple Spots, it is an Argument that a mortal Gangrene is at hand or present.

1405. The Indication in this second State (1401.) is different according to the different time that the Disease has lasted, and is like to last : For in the first beginning of the external Inflammation shewing it self, it seems reasonable to endeavour to prevent its proceeding to an Impoſthumation, of which we have already spoke (in 1398, 1399.) Or, if that be neglected, Care ought to be taken that the Suppuration be as little as possible, and be promoted slowly, and far from the Head: Which is effected, 1. By keeping the Patient to that thinnest Diet, which at the same times is contrary to Putrifaction. 2. By giving him diluting, soft and tart Drink. 3. Medicines contrary to the making of much Pus, such as are opening and diluting in great Quantities, and continually given. 4. Bathing of the Feet repeated twice a Day, fomenting them continually with something lukewarm; Blisters applied to the hollows of the Feet and Knees. 5. A cool regimen, and chiefly by the admission of a clean and cold Air, but covering at the same time the Limbs and lower parts of the Body very warm. And these things ought to be done immediately upon the first invasion of this Disease. 6. If the Distemper proceeds too violently on the fifth Night you may give safely and to an Advantage some Opiates not neglecting

at the same time doing all that has been recommended before.

1406. After the running off of this second Stage (1401.) follows the third State, that of Imposthumation, during which that increases and arrives to its height : In this the Pustules already purulent do every day grow larger, then ripen, turn white, yellow, and break on the third or fourth Day of this State. Then doth the whole Skin and its subjacent Fat abound with a moveable Pus, it is dried externally, and inflamed in every place free from Pus ; hence, from the impediment of Perspiration and Circulation, from the irritation of the membranous and nervous System, from the soaking of Pus into the Veins, there grows a Fever of the worst Kind, with the worst Symptoms ; If this purulent Matter mix'd with the Blood is moved long, it putrifies (82. 100. 406) hence according to its falling upon different Parts of the Body it produces cruel and scarce superable Effects, as are Deliria, Phrensies, Quinsies, Peripneumonies, Pleuresies, Vomitings, Bloody-Fluxes, Inflammations of the Liver and Imposthumations of the same ; Boils, Tumors, Abscesses, and stiffness of the Joints ; a Wasting, Consumption, and innumerable more Evils.

1407. And if then the Matter be thinner, sharper, and the Disease very violent. The Skin, Fat, and Flesh are all eat away ; there grow wide, ill-natur'd Ulcers, often penetrating to the very Bones, and very homely disfiguring Scars.

1408. In that third State (1405.) the Physician ought to promote the exit of the Pus to the
external

External parts, driving it from the Internals; which is done by Relaxing the Skin with lukewarm loosening Fomentations, constantly, though with much trouble and nauseousness renewed; A constant washing and gargling of the Mouth and Throat; drinking much of warm, cordial, detergent, aperient Decoctions and contrary to Putrefaction; Injecting daily a gentle, diluting, emollient and loosening Glyster, to be kept long in order to bathe the Intestines; Dieting upon Flesh-Broaths duly salted and sour'd; allowing now and then a moderate Draught of good generous Wine; Giving also against some violent and troublesome Symptoms a sufficient Dose of Laudanum or Opium.

1409. If the Small-pox proves to be of the worst Kind: that there is rather a gangrenous Ichor than Pus; that almost the whole Skin is obsessed with it; it easily appears why this Disease is so unavoidably fatal notwithstanding all the possible care taken: And it will be much plainer yet to any one acquainted with Dissections, that as the external Skin is full, so the Eyes, all the Membranes of the Nostrils, all the Covers of the Mouth, the Windpipe, the Bronchia, the Stomach, the Gullet, Intestines, Liver, Spleen, and Lungs are full of the like Pustules; and hence he will understand what has been said, and sees what is requisite for the Cure; and whether the greatness of the Disease, the loss of so many that die with it, after all the fam'd Remedies have so often been tried in vain, ought not to stir up the Industry of good Physicians, *To try all the great Medicines*
from

from the beginning of its Invasion : For by the common Methods few do escape, but such as wou'd have been saved, though nothing at all had been done to them. NB. " I cannot help joyning heartily in this Opinion of our Author, and must " add, that in this Disease a good Physician ought " from the beginning to do every thing, as if " he knew that all the worst Symptoms wou'd ensue, if not prevented : But this I again wou'd only have applied to grown People.

Of Epidemical Diseases.

1410. It ought to be observ'd above all things, that the Diseases of the Fluids hitherto described, though they Seem the same to the unwary by their Name, most of their Signs and by some appearance of the same event, yet by a hidden quality, by Phœnomena hardly taken notice of but by the most skilful Judges, at the different times of the Increase, Height, Coction or Crisis, they differ vastly as to their Effect, Event, and Method of cure.

1411. And that therefore they require a quite different administration of the six Nonnaturals, another Method and different Remedies.

1412. The Cause of which variety however is so dark, that the same hitherto has not been able to be assign'd to any one peculiar Error committed in the Nonnaturals.

1413. And yet as the same doth afflict many at a time, that the same may be avoided or kept off by either Wind or Fire, it is generally believ'd to be in the Air.

1414. And in that, more because of the unaccountable variety of Exhalations, which hurt our Machine either by their being mix'd with our Blood, or as they only stimulate, than of any notable change of the sensible qualities ; as is known from observation.

1415. And yet it seldom occasions Diseases but as one Man catches it from another, which is wonderful.

1416. And it is those Diseases, thus catch'd, that we use to call Epidemical.

1417. The Nature of them is known by the Rules laid down in (11, 12, 13.)

1418. But the Physician is guided to the knowledge of a new Epidemical Disease hitherto unobserv'd by him, and he lays his Plan for a Cure, 1. By referring the present new Case to such a Class of Diseases known to him, as is most resembling it. 2. By observing what sort of Disease invades and is most general about the Equinoxes of Spring and Fall. 3. By giving a particular heed to the spontaneous Phænomena which precede, accompany, or follow the abatement or increase of the Disease, and Health, or Death of the Patient. 4. By minding every thing which is necessary to be done, the Aliments and Excrements, and what Good or Evil follows upon each Particular. 5. By comparing the Case of several that are ill at the same time. 6. By abstaining from any Remedy that is dubious, occasions too great a stirr or alteration in the Body, and doth still more obscure the hidden Nature of the Disease.

1419. From all which observed with the nicest

cest attention the Physician makes his Indication.
NB. " since *Hypocrates* no body has wrote better
" upon this Subject than *Sydenham*.

Of the STONE.

1420. Wherever in a Humane Body another certain Body altogether insoluble stops, there soon gathers upon it and about it a Crust more or less stony.

1421. If this happens in the Kidneys from the earthy part of the Blood dried up, there follows and grows a Stone in the Kidneys, taking its Birth chiefly at the end of the smallest Arteries there in the shape of a Sand.

1422. Which increasing there gradually doth stop up the Kidney and choaks its flesh, consuming the same, and drives out the same in the form of clotts of Blood, Pus, Caruncles and Skins, and corrupts the whole at last, exciting bloody Urine, pissing of Pus and foetid black ulcerous Matters; and doth even occasion an Ulceration and Inflammation of the neighbouring Parts.

1423. When the same is moved from the place of its birth (1420.) into the Pelvis, and from thence into the Ureter, into its windings and narrow Passages, or the orifice of the Bladder, it often causes a suppression of Urine, with an inflammatory Pain.

1424. When it has pass'd thro' the Ureters into the Bladder, it is often soon and successfully expell'd.

1425. If it remains in the Bladder it grows like an Onion.

1426. The Red original Kernel in the Center of

the Stone always remaining, all the other Rows are red, white, ash-colour'd, or blue, and from these several appearing Colours one may know the several degrees of its solidity and incapacity of being dissolved ; Which is attested even by Chymical Experiments.

1427. When it stops in the Bladder, it occasions an Inflammation and its Symptoms, fretting Ulcers, pissing of Pus, Stranguries, an obstruction of the Urethra ; The Patient cannot make Water but in certain Postures, and chiefly lying upon his Back ; it creates an Hætic Fever and a Consumption : Sometimes it is push'd into the Urethra, and there it stays incapable of going either forwards or back again into the Bladder.

1428. The Stone in the Kidneys is known from an obtuse Pain there, from a pissing of Blood after riding in a Coach, or other great motion upon the Stones and rough Roads, upon any other violent motion or straining of the Body, from having often voided some Stones, Skins, Pus, or Strings.

1429. That there is a Stone in the Bladder is known, from the pain in making Water, before and after it ; from the Water being made only by drops, white with a mucous, thick, heavy Sediment to a great Quantity, from an itching at the Gland or Head of the Yard ; by putting the Fingers up the Fundament and pressing towards the Neck of the Bladder, and by probing with the Catheter, and by observing the Symptoms (of 1425.)

1430. The Stone in the Kidneys requireth its being lessen'd, expell'd from thence, and thus steer'd, that it may not hurt much in its passage.

1431. This is effected, 1. By keeping the Patient to a liquid, soft, thin, and pretty salt Diet; the drinking of Water or something like it; yet keeping up the strength of the Circulation.

1432. 2. The Second is obtain'd by loosening the Vessels with Baths, Glysters, and relaxing oily Liniments; By making the passages slippery with moistening Emollients, soft and gentle oily Medicines; Opening them with Opiates and Anodynes; Driving them on with gentle Diuretics prudently managed, and with a gentle Motion, such as that of a Boat, or a very easy going Horse.

1433. 3. The Third by preventing the Symptoms; that of Inflammation by letting of Blood, and other proper Remedies; that of Pain by Anodyne Emulsions; that of the asperity of the rugged Stone by oleous, soapy and glutinous Medicines.

1434. For as to any true Dissolver or Specific for the Stone, none as yet deserves any Credit.

“NB. The Ingenious Dr. *Cyprianus*, who has deserved a great Character for his Dexterity and Success in cutting for the Stone, has told me some Years ago, that he had been at work some time in his Laboratory to find out a Specific Lithontriptic, but I told him then, that he would never succeed as long as he continued of *Van Helmont's* Opinion and others, who think that the Stone owes its first Birth and Increase to the volatil and spirituous parts of the Blood: And hitherto I have prophesied right.

1435. When the Stone is fall'n into the narrow passages of the Pelvis, it requires the same Means (from 1430. to 1432.) And chiefly Glysters, Fomentations and Bleeding.

1436. That the Stone is fall'n through the Ureters into the Bladder is known from a foregoing Nephritic Pain, from that Pain being afterwards felt in the tract of the Ureter, from the ceasing of both with the Signs of (1428.)

1437. Then is it requisite to expel it forthwith, lest the same shou'd stay behind to grow larger and do greater Mischiefs.

1438. This is done by the same Means as from (1430. to 1433.) but applied to the very Part; by an oleous Bath, and the like Glyster, injecting of Oil into the Passage towards the Bladder, and by rubbing of the same gently to increase the elasticity of the Fibres.

1439. Then ought the several Symptoms to be eased as they imitate and are of a Kin to this or another Disease.

1440. If the Stone is unmoveably stop'd in the Urethra, use Injections, Fomentations, sucking after the manner of the *Egyptians*, stir it, and endeavour to pick it out with any proper Instrument, press gently upon it, or even make an Incision in the Penis, or a Puncture in the Perineum.

1441. If it be bigger, than what can be taken out by this Method, your Patient must undergo the Operation for the Stone.

1442. And rather chuse to do it by the *Apparatus Magnus* as being the most certain.

1443. Yet is the Event of the Operation at all times dubious.

1444. But in Women dilate the Urethra, for there is seldom occasion to make an Incision in theirs to take out the Stone.

1445. If

1445. If lodging in the Neck of the Bladder it stops up the Urine entirely and for a great while, so as to endanger Life, push the Stone back with a Catheter.

“ The best Treatise about the Stone and the Operations for the same, is without doubt that of Mr. Tolet.

Of the VENEREAL DISEASE.

1446. The Venereal Disease began in the Kingdom of *Naples* since the Year 1463. spread it self through the *French Army* there, from thence thro' *Europe*, and is still a very common Disease.

“ NB. It may be true what *Sydenham* saith, that the Name of this Disease was not known in *Europe* before Travellers had brought it (as he saith) from *Guinea*; But it is amazing to me that either he, our Author, or any unprejudiced Lover of Truth, and Men of exact reasoning in all other Matters, shou'd so far be blinded, as to believe this Disease new, and not to know its true Features in a great many passages of the Ancients both Sacred and Profane; Dr. *Sprengel* in his first Aphorism of the XVIIth Section concerning the *French-Pox*, doth enumerate most of those Passages, to which I refer the Reader; But neither he nor any Body else, that I know of, doth mention *that plain Passage out of Otho's Life in Plutarch*, which in my opinion is past all cavilling, which had our Author, or *Sydenham* seen, it is impossible but that Men of their Candour and Equity would have alter'd theirs. It is as follows; *Besides, nothing*

gratify'd or gain'd the People more than his Justice in relation to Tigellinus, who was a Person not only actually punish'd by the very apprehension of Punishment, which the whole City requir'd as a just Debt, but with several Diseases too, that he had contracted by conversing with Lewd Women: And though the ill Consequences to which this course of Life expos'd him, were generally look'd upon as Punishment enough, yet the People thought Life it self too great a Benefit for him to enjoy, who had been the Occasion of so many Mens death.

1447. Which is infective several Ways, for sometimes it is Hereditary; sometimes Children get it by sucking unclean Nurfes, some People get it by handling and conversing much with People whose perspirable Matter is very putrid, ulcerous and corrosive; Dry Nurfes will communicate it to Children, when having pocky Ulcers in the Mouth or Throat, they taste the Childrens Papp or Meat; the most common Way of infecting is by Coition, when the Liquids of the Genitals are infectious, &c.

1448. And it generally shews it self in that Part, where it was first contracted.

1449. Nor was it ever observ'd, that either Man or Woman did catch it by lying with one that was not infected already. "NB. This Aphorism also I cannot give my assent to, being absolutely of Opinion, That a sound Woman may bring it upon her by no other fault than too frequent Coitions with even sound Men. See Dr. Sprengels, Sect. XVII. Aph. I.

1450. The

1450. The Part is first known to be infected by an itching Heat, small Inflammation, a whitish Speckle, which scales, gnaws, then grows mucous, and which cannot be cured by common Medicines in other Cases seemingly alike.

1451. Hence growing on, it first infects the adjacent and generally the external Parts with the like ulcerous Pustules, afterwards it reaches the Internal Parts, as the Lips, Gums, Palate, Tongue, Throat, Nose, Brain, Lungs, Liver, Spleen, Womb, &c.

1452. Which do drop a mucous Filth, which is slow, greenish, eating into the Flesh, increasing more in Breadth than in Depth.

1453. Hence Chankers on the outside of the Penis, and a Gonorrhea on the Inside ; and in the Vagina a flowing of white Matter, which abundance will put off under the Denomination of *the Whites*.

1454. The Glands of the Groins in both Sexes tumify, and Bubo's arise from a Communication of the Contagion by the Lymphatic Veins to those Parts.

1455. And in Men you may see sometimes so great an Inflammation of the Penis, that it is often difficult to prevent its hastening into a Gangrene.

1456. The Testicles also will swell, grow painful, and often ulcerate from an Inflammatory Tumor having laid hold of the Vesiculæ Seminales.

1457. Caruncles also will grow in the Urethra, whence Strangueries, and an eating of the Urethra, of the Prostates, the Neck of the Bladder and the Seminal Vessels : The same things do happen in the Organs of Women.

1458. Hence it is carried into the Limbs, with Night-pains occupying the middle of the Limbs; and with a Stiffness of the Joints.

1459. Whence it shews it self in the Cartilages, chiefly those of the Nose, and Palate, which it eats through.

1460. Then occupying the Middle Substance of the Bones it produces a Caries there, chiefly in the Scull.

1461. Then do the Parts surrounding them rise into very ill-natured Imposthumes.

1462. It even raises them to hard Knobs, which first are painful but a little, but more acutely by degrees, till they corrupt all the surrounding parts above them.

1463. So that the Signs, to know this Disease by, are pretty plain.

1464. A Gonorrhea or Clap, is cured by Bathing, Fomentations, Injections, Mercurial Purges often repeated, Emulsions, Balsamics, abstaining from all high Meat and Drink inciting to Venery, but on the contrary, living upon a small and thin Diet.

1465. You must go on in this Method till nothing unusual doth any longer drop from the Penis, or shews it self in the Urine.

1466. The swelling of the Penis is cured with Anodyne, discussing, and emollient Cataplasms, like Fomentations, and large Bleeding, and with all the Means of the foregoing Aphorism.

1467. A Venereal Bubo is cured by dissipating the same with specific Plaisters; or if that doth not easily succeed by Suppurating and after aper-
tion

tion cleansing the same. “ NB. This I know
 “ from undoubted and repeated Experiments to
 “ be good Practice, whatever the generality of
 “ Surgeons or Clap-Doctors may clamour against
 “ it, and I have bled largely to help the dissipating of a Bubo ; but then it was in the very
 “ beginning, when I cou’d command a Gonorrhæa to carry off the Matter, &c.

1468. Swell’d Testicles must be fomented as in (1465.) If it presses hard, you must bleed the Patient in the Arm ; and you may ease it also with a Plaister about the Scrotum , and lift it up with a Bag, till it has return’d to its natural bigness. “ NB. Nothing gives more ease in this peculiar Case than Vomits, which chuse rather
 “ of *Turpethum* than any other, because it answers in more than one respect.

1469. Pustules and Chankers must be consumed to the quick with Mercurials, and then cured with gentler Means, still with a small mixture of them to the last.

1470. And you must all along use the internal Means recommended in (1463.)

1471. The Venereal Whites in Women , are cured by the same Method as a Clap in Men.

1472. Not neglecting the most useful detergent soapy and Mercurial Washes and Fomentations.

1473. But when Pustules are dispersed all over the Body, Pains invade the Limbs and nightly Uneasiness, large Buboes, gnawings of the Bones, an often renew’d Clap ; all these shew, that the Patient is *Pox’d*, and nothing then will do, but a Salivation by Mercury.

1474.

1474. Which to raise with the better Success, make your Patient first drink plenty of Ptyanes for some Days.

1475. Then give him every two Hours a small Dose of Mercurius Dulcis. “ NB. This Method
 “ of salivating with internal Medicines is far the
 “ safest even in the opinion of several of the a-
 “ blest Surgeons in *London*, and it is nothing but
 “ Laziness or Covetousness that has prevail’d up-
 “ on the Majority of Surgeons ; who make a
 “ Bargain with their Patients, or who have No-
 “ thing for their pains in the Hospitals, to extol
 “ the anointing before this Method.

1476. As soon as the Breath begins to stink, the Gums to ache, the Teeth to grow loose and stick out, then ought the Physician to attend carefully and consider whether he ought to go on, to stop, or even to make some diversion.

1477. If the Patient spits three Pints or two Quarts in Four and twenty Hours it is sufficient.

1478. If he spits less, you must again give One or more Doses.

1479. If more than what his strength can bear, you may suspend it with a gentle Glyster, Purge, or sweating Medicine.

1480. If the Mercury runs violently downwards causing griping and painful Stools, give an Opiat and Diaphoretic.

1481. If the Mouth, Gums, or Jaws, do swell or pain too much, you must use a soft, gentle, liquid Gargle or Wash, or a Glyster, Purge or Sweat.

1482. You must go on till all the Symptoms are vanish’d, which generally takes up 36 Days.

1483. Then you ought for 36 more Days to give him still now and then a small Dose of Mercury, to retain yet a small Spitting.

1484. Nor is there any other sort of Remedy requisite here to restore perfect Health. “NB. I
“ must beg the Author’s pardon for that; and I
“ believe I shall have most Practitioners of my
“ side, to declare for several repeated Purges and
“ even Diet-drinks for some time after the Saliva-
“ tion, partly to remove all the Mercury and its
“ ill Effects upon the Brain and Nerves, and
“ partly to restore the tone of the Stomach and
“ the Blood.

1485. The Nodes are lessen’d with specific Plaisters as in (1466.) or by scraping the Bone after having laid it bare.

Of the Ricketts.

1486. About the Middle of the Sixteenth Century, there arose a new Distemper in the Inland parts of *England*, spreading it self from thence through that whole Kingdom, and all the Northern Regions of *Europe*, called *the Ricketts*; now a-days a very common Disease.

1487. It is never born with the Children, comes on seldom before they are nine Months old, scarce ever after they are two Years old, but most commonly between those two Ages.

1488. But it is generally more fatal to Children, whose Parents are of a weak and loose texture of Body, are idle, delicate, live in a plentiful manner, delight in fat and sweet Meats, eat little Bread, drink sweet Wines, and much warm
Water;

Water; that have been exhausted, before they got them, by chronical Diseases, Venery, or Old Age; Chiefly if they were infected by the *French Pox*, or had been weaken'd by many Claps; For those have generally afforded no other than decay'd Seed in the getting of their Children.

1489. But if the Child gets a Nurse that is likewise infected with those Diseases and Infirmities, then doth the Child grow so much the more Ricketty as he grows too hastily in bulk.

1490. Chiefly if he be kept too cool and wet; If he is fed with watry, mucilaginous, raw Summer Fruits, Fish, unfermented meally and sugar'd Aliments: If he lies a long while ill with an Autumnal Intermitting Fever, a chronical or acute Disease; If he be ill cured of any sort of Scurf, Wolve, Ulcers, or that the same be improperly suppress'd; If he be enervated with bathing, fomenting, Liniments, Ointments, or moist Steams; Or if after the manner of most Children in *Holland* he be left in a continual, quiet, sitting posture over a Close-Stool, with his Coats turn'd up.

1491. This Disease is known to begin in Children as do not walk yet, 1. From their very Age. 2. Precedent Causes. 3. From the Brothers or Sisters being affected with the same. 4. From a flaccid Tumor of the Head and Face. 5. The looseness of the Skin. 6. Bigness of the Belly. 7. A leanness of all other Parts, chiefly the Muscles. 8. A Protuberance of the Epiphyses at the Joints of the small Bone of the Elbow, or the Ulna, the Shoulder, Knee, Tibia and Fibula. 9. The largeness of the Jugulars, while the others grow less conspicuous and flat.

1492. But in them that had already begun to walk alone this Disease is known to be approaching, 1. From all the just mention'd having preceded. 2. From their slow, weak walking, inclination to fall, their being unable to stand firm, or long but always inclin'd to sit down; which soon changes into an habit of lying down perpetually, and at last into an impossibility of moving any Limbs, with a loose hanging Neck, and nodding of the Head. 3. From a forward sharpness and acuteness of Understanding, a clean Apprehension and quick Sense; when their Appetite and Digestion are all the while unimpair'd.

1493. When the Illness is at this height those affected therewith have a large Head, with very large apparent Sutures; Their Chest is flat and squeez'd, as it were, on the sides, but raised high and pointed on the Breast, with Nodes at the Extremities of the Ribs; Their Belly sticks out; Their Teeth are rotten and black; all which encreasing daily, do often leave Distempers of the same kind, troublesome all the rest of their days, and chiefly the Spina Ventosa, and rottenness of the Bones.

1494. And during the whole course of this Disease, a small slow Fever doth consume the Body until Death; and then doth all the Fibres, Membranes, Vessels, Entrails shew themselves soft, wither'd, the Humors all broken and slimy. So that we may conclude the proximate Cause to be a sluggish, slimy, cold, and vappid Cacochymie, perhaps with a Mixture of a conceal'd Venereal Poison, and together a very loose Fabrick of the Solid Parts.

1495. 'Tis best cured, with a light, dry, less fat Diet of a good Digestion, season'd with the softest Aromatics, given often, but always in a small Quantity : With a generous drink of either Wine or good Beer, not stale, but well brewed, and of the Nature of *Brunswick* Mum. A dry and warm Air. Very dry Clothes, sufficiently warm, and rather of Woollen than any other Stuff. Bedding, with some drying, strengthening aromatic Herbs in it, in the higher and drier parts of a House upon wooden Bedsteads. By carrying them about, dancing them, or riding 'em up and down over the Stones to shake their Bones and Bowels, and thereby to strengthen them : By repeated, hot, dry frictions with flannels, or aromatic warm Herbs, chiefly their Bellies and Back-bones. By blistering them sometimes, giving them gentle but repeated Vomits, though with due Prudence. By purging them for some days successively with Rhubarb or some other strengthening Purge. Lastly, by giving them continually strengthening Diet-drinks that are at the same time drying, Antiscorbutic and raising the Spirits. It is a Query whether the Cold Bath wou'd not be advantageous to them ? And whether any good can be done with any sort of Liniments ? “ NB. I answer, Yes ; with the “ fine *Adeps humanus* upon the *Spina dorsi*, with “ a Mixture of some warm Aromatic Oil.



F I N I S.

